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Award Number: W81XWH-11-1-0444

TITLE: Using Technology to Expand and Enhance Applied Behavioral Analysis
Programs for Children with Autism in Military Families

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REPORT DATE: July 2012

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

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REPORT DOCUMENTATION PAGE				<i>Form Approved</i> <i>OMB No. 0704-0188</i>	
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1. REPORT DATE 01-07-2012		2. REPORT TYPE Annual		3. DATES COVERED 1 July 2011 - 30 Jun 2012	
4. TITLE AND SUBTITLE Using Technology to Expand and Enhance Applied Behavioral Analysis Programs for Children with Autism in Military Families				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER W81XWH-11-1-0444	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Wayne W. Fisher, Cathleen C. Piazza, Michael E. Kelley, Henry S. Roane, and Kevin C. Luczynski E-Mail: wfisher@unmc.edu, cpiazza@unmc.edu, kelboat@gmail.com, roaneh@upstate.edu, and kevin.luczynski@unmc.edu				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) University of Nebraska Medical Center Omaha, NE 68198-5450				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Autism spectrum disorders (ASDs) are disorders that affect as many 1 in 91 children. Without intensive treatment, the long-term outcomes for children with an ASD remain bleak and are associated with a high divorce rate among parents. Interventions based on applied behavior analysis are well documented, but unfortunately these services are often not available to military-dependent children because of lack of appropriately training individuals. This project will demonstrate how web-based technologies can increase the availability of this effective treatment. A large part of the first year of the award involved creating e-learning materials for parent-training and tutor-training curricula in Experiments 1 and 2. In designing the curricula, the first part involved creating 20, 60- to 90-minute multimedia modules on general content areas in applied behavior analysis. We have completed the didactic content, slide-by-slide narration, post-module quiz, and video exemplars of the target skills (when relevant). The second part involved creating 10, 60- to 90-minute scripted role-plays, in which a parent (Experiment 1) or tutor (Experiment 2) practices the target skills with an adult friend while receiving feedback from an expert at UNMC. Now that we have finished creating and editing the multimedia modules and scripted role-plays, we are currently recruiting military families and eligible tutors for the first cohort of participants.					
15. SUBJECT TERMS Autism, Telemedicine, Applied Behavior Analysis, Parent Training, Tutor Training					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 71	19a. NAME OF RESPONSIBLE PERSON USAMRMC
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U			19b. TELEPHONE NUMBER (include area code)

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Introduction

Autism spectrum disorders (ASDs) are disorders of the brain that affect as many as 1 in 91 children. Without intensive and appropriate treatment, the long-term outcomes for children with ASD remain bleak and are associated with a high divorce rate among parents and increased risk for mental health disorders among family members. The efficacy of and empirical support for interventions for ASD based on applied behavior analysis (ABA) is well documented. Unfortunately, these services are often not available to military-dependent children because there are not enough appropriately trained individuals to design and provide ABA services. This project will demonstrate how web-based technologies can increase the availability of effective treatment for military-dependent children with ASDs. By evaluating a technology-enhanced treatment delivery model, military families will be able to receive empirically supported treatment services in a timely manner anywhere in the world. Also, training therapists to implement ABA programs using a web-based model will greatly increase the number of well-trained therapists in areas around many military bases.

Body

Task 1. Clinical trial preparation and initiation, includes 10 participant families (timeframe, Months 1-9).

1a. Hire and train all research staff

1. We hired three doctoral students to assist throughout the duration of the current award.
2. The primary and secondary investigators have trained the three doctoral students on the goals and procedures for achieving the specific aims of the experiments.
3. We have completed an operations manual (see Appendix 1) that details how to (a) implement the web-based technology for remotely interacting with families using video conferencing software and network-based wireless cameras (for Experiments 1, 2, and 3), create and distribute the training modules using Adobe Presenter and Blackboard (Experiments 1 and 2), and conduct observational sampling procedures for assessing and monitoring parent-child and tutor-child interactions (Experiment 3).

1b. Compile all training materials into an easy-to-use package

1. In designing the curricula for both parents (Experiment 1) and tutors (Experiment 2), the first part involved creating 20, 60- to 90-minute multimedia modules on general content areas in behavior analysis. Based on the pilot testing, we removed one of the modules because we found that more than one role-play session may be necessary per module. For all 19 modules, we have completed the didactic content, slide-by-slide narration, post-module quiz, and video exemplars of the target skills (when relevant).
2. The second part involved creating 10, 60- to 90-minute scripted role-plays, in which a parent (Experiment 1) or tutor (Experiment 2) practices the target skills with an adult friend while receiving feedback from an expert at UNMC. Based on the pilot testing, we removed one of the role-plays because we found that more time may be necessary to complete other role-plays. For the 9 remaining role-plays, we completed the script and corresponding data-collection system.
3. We used Adobe Presenter® to publish the PowerPoint content, slide-by-slide narration, animation, and videos as a single file, which will allow dissemination of the curricula in an easy-to-use package. Though this process, we discovered that the large file sizes of the multimedia modules were presenting a problem for using Blackboard as our file-sharing service. We worked with the information-technology-service department and found a solution for distributing most modules through our University's blackboard system; for two modules, we redesigned them in order to reduce their file size. After this solution was identified, we uploaded all

of the multimedia modules and associated quizzes for the tutor-training and parent-training curricula onto our blackboard's file-share system for dissemination.

1c. Pilot, test, and refine training materials package

1. After pilot testing all the multimedia modules in Experiments 1 and 2, we revised the format of the modules to (a) expand on the content by providing additional picture examples, schematic representations, and more video exemplars of the target skills; (b) embed review questions throughout the modules to prompt recall of content recently covered; and (c) increase the amount of animation on slides and within video exemplars to better highlight the critical features of the target skills.
2. After pilot testing all of the role-plays in Experiments 1 and 2, we (a) increased the number of scripted role-play opportunities and (b) modified the script for the type of responses that the confederate "child" (i.e., adult friend) exhibits. Regarding the latter modification, we changed the script such that the confederate not only exhibits the target skills but also a range of challenging responses that may make implementation of the target skills more difficult. By including these challenging responses during the role-plays, the parents and tutors are more likely to be prepared to implement the target skills correctly.

The modifications to both the multimedia modules and scripted role-plays required additional time and effort, which has slowed our rate of progress for completing the parent- and tutor-training curriculums (for Experiments 1 and 2). However, based on the pilot data, we expect that the modified materials will be more effective at teaching the target skills. Next, we conducted a second round of pilot testing for all of the redesigned modules and scripted role-plays.

3. We designed the pre- and post-tests for Experiments 1 and 2 (see Appendix 2).

1d. Allow 2-6 months to obtain regulatory approval on human subject use (includes approval from local IRB and USAMRMC)

1. We made all of the changes to the proposal recommended by Mr. Chris Baker's, U.S. Army Medical Research Acquisition Activity Specialist. We received IRB approval from UNMC's IRB committee.
2. The IRB documents approved by the IRB at UNMC were then reviewed and, after additional changes were incorporated, approved by Dr. Stubbs, USAMRMC Human Subjects Protection Specialist.

3. Because Dr. Stubbs recommended changes to our IRB-approved proposal and forms, we resubmitted the most recent revisions of the IRB materials to UNMC's IRB committee and have received the final re-approval of the project.

Task 2. Complete EIBI for 5 cohorts, includes 50 participant families (timeframe, Months 10-42).

2a. Recruit and pretest 1st cohort of 10 children with autism and their parents, with 5 randomly assigned to the technology-enhanced EIBI treatment group and 5 to the waitlist-control group (Month 10)

1. During this period, we completed the second and final round of pilot testing for all redesigned modules and role-plays across Experiments 1 and 2. In addition, during pilot testing we evaluated the use of different hardware (i.e., webcam versus internet-protocol cameras) and software (i.e., Adobe Connect, GoToMeeting, and Vido) options to determine which setup was most reliable and efficient for providing real-time (i.e., synchronous) feedback remotely to parents. From our evaluations, we have determined a combination that works well for most of the family's homes we have piloted.
2. We also identified and piloted a new wireless camera (named Dropcam) to use for in-home recordings of tutor, parent, and child interactions, which uses less bandwidth to transfer video recordings from participants' home to our experts (i.e., for asynchronous feedback) at the University of Nebraska Medical Center. This is important because during our pilot testing with local families in Omaha, Nebraska, we have encountered, at times, extremely slow upload speeds from their homes while transferring recorded video. These slow speeds seemed to be due to the internet service provider (e.g., Comcast, Cox) intentionally slowing data transfer (technically referred to as bandwidth throttling) below the transfer speeds purchased by the family.
3. To increase the likelihood of successfully recruiting the targeted number of families and tutors for the first cohort of participants, we have:
 - a. Posted information about the project on internal and external registries. We have successfully submitted descriptions of the grant to UNMC's clinical-trials database as well as clinicaltrials.gov (see the following link: <http://clinicaltrials.gov/>). The description of the grant in both registries indicates that we are currently recruiting participants.
 - b. We asked our primary local news outlet, KETV Channel 7 News, to film and air a segment during their primetime new hour about recruiting military families and in-home tutors for the grant. In addition, with the help of our social media

specialist, a lead article about the grant was written for local newspaper (called, “The Base”), which is specifically published for military families.

- c. We continue to share information on the project through social media outlets such as (a) public, military listservs (Yahoo®) and social-network forums (e.g., we created a Facebook page about the project), (b) listservs and chat forums that are visited by families with children diagnosed with an autism spectrum disorder (ASD), and (c) listservs, social-network forums, and chat forums that are geared toward military families with a children diagnosed with an ASD. We spoke with several military families who are currently receiving on-site services in our Center for Autism Spectrum Disorder’s program, and they have provided us with several listservs and social-network forums. We have also created brochures that describe the grant and the inclusion criteria for families and in-home tutors.
- d. We have been in communication with local and national Exceptional Family Member Program (EFMP) coordinators and described our project to them so they can share this information with military families who may be looking for these types of services. For local EFMP coordinators, we are giving presentations on military bases; in particular, we are working closely with Offutt Airforce base. We have been in contact with regional EFMP coordinators and other personnel at national military bases (e.g., Fort Carson and Fort Bragg).
- e. We have contacted organizations that directly or indirectly serve children with autism. In particular, the Families for Effective Autism Treatment, National Military Family Association, Nebraska Autism Spectrum Disorders Network, and Nebraska National Guard Family Assistance, and Parent Training and Information Nebraska. These organizations have disseminated flyers with information detailing our parent- and tutor-training curriculums and our early intervention services for children diagnosed with autism in military families.

2b. Train parents and staff in 1st cohort (Months 11-12)

- 1. **Experiment 1:** We have enrolled 2 adults to participate in the 40-hour tutor-training curriculum, and 1 adult to participate in the wait-list control group. We are in the process of conducting the pre-tests for these participants.
- 2. **Experiment 2:** We have enrolled 1 parent to participate in the parent-training curriculum, and 1 parent to participate in the wait-list control. We are in the process of conducting the pre-tests for these participants.
- 3. **Experiment 3:** We have enrolled 1 child with an autism spectrum disorder in the early-intensive-behavior-intervention group and 1 child in the wait-list control group.

Key Research Accomplishments

- We have created the multi-media modules and scripted role-plays for the 40-hour tutor-training curriculum and the parent-training curriculum. In addition, we have piloted with success the application of providing real-time (synchronous) feedback to adults remotely using recent video-conferencing technologies and capturing in-home parent-child interactions using wireless cameras (asynchronous feedback).

Reportable Outcomes

There are no reportable outcomes at this juncture of the award.

Conclusions

There are no conclusions at this juncture of the award.

References

Not applicable.

Supporting Data

Not applicable at this point of the award.

Appendix 1

Virtual Care Operations Manual

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Initial Setup

Virtual Care Computer Setup

This document will guide you through the setup of a laptop computer for use in the Virtual Care project. All of the necessary software can be found in the “New Laptop Setup Software” folder on the virtual care desktop.

I. Windows:

- a. **Computer Name:** The computer name is set in the control panel (XP) or by typing “rename this computer” into the start menu search bar (Vista/Windows 7). The computer should be named to reflect the set it goes with, i.e. MMI-RemoteSet3.
- b. **Username and Password:** The User settings can be accessed by opening the start menu and clicking on the user icon at the top of the start menu. The username should be set to RemoteSet # to reflect the set it is a part of, i.e. RemoteSet3 for the computer in Set #3.
- c. **Power Options:** The computer should be set to never sleep, hibernate, or turn off due to inactivity. The sleep button and lid closure should both be set to “do nothing.”
- d. Restart the computer.

II. Antivirus Software:

- a. Open the “sep_winsetup32” application. It will download and install necessary updates and definitions. This may take some time depending on the speed of the internet connection. It is advisable to do this step with a wired connection.

III. Axis Camera Station Client:

- a. **Installation:** The Axis Camera Station Client should be installed.

IV. LogMeIn Software:

- a. **LogMeIn Remote Control:**
 - i. Open LogMeIn Installer software. Follow the on screen installation instructions.
- b. **Hamachi:**
 - i. Open the Hamachi Installer software. Follow the on screen installation instructions.
 - ii. Go to www.logmein.com and log in. Go to Networks > My Networks and find the “MMI_Virtual_Care” network. Click the edit link. Click add/remove members. Find the name of the computer and check the box next to it. Select the “Spoke” radio button. Click save.

V. Video Processing/Playing Software:

- a. **SUPER:**
 - i. Open the “SUPER Setup” installation software. **Note:** The SUPER Installer may suggest a number of additional programs to install, these are unnecessary adware, **do not accept, agree to, or install any of the additional programs.**
- b. **AviSynth:**
 - i. Open the “AviSynth” installation application. Under “Select Extra Files” select the “Install FilterSDK” option.
- c. **GOMPlayer:**

- i. Open the “GOMPLAYERENSETUP” application. Follow the onscreen installation instructions. **Decline any additional toolbars or software** that may be recommended during the installation.
- d. **VLC Player:**
 - i. Open the VLC installer. Under installation type select “recommended.”
- e. **K-Lite Codec Pack:**
 - i. Open the “K-Lite_Codec_Pack” installer. Select simple setup. Enable internal decoder for H.264 video. Under File Associations click the “select none” button.
- f. **DirectshowTweaker: Windows 7 Only**
 - i. Open the “Win7DSFilterTweaker” utility. Select preferred codecs. Under AAC change the radio button from Microsoft to FFDSHow.

Downloads: If the installation files cannot be found in the “New Laptop Setup Software”

- a. Antivirus: <http://www.unmc.edu/its/186.htm> Select Symantec End Point Protection Anti-Virus. You will need to log in with your UNMC username and password to access the software, then select 32bit if given the option and then click the large green download button.
- b. LogMeIn: www.logmein.com, logging in, then clicking the add client button and following the instructions.
- c. Super: www.erightsoftware.com. **Note:** There are many ads for other software and it is somewhat difficult to find the actual download link for SUPER.
 - a. Find the download link here: <http://www.erightsoft.com/Superdc.html>. At the bottom of the page there is a link that reads “Start Downloading Super”. The link will bring you to a new page and then click on the link that reads “download and use”.
- d. AviSynth: <http://sourceforge.net/projects/avisynth2/>
- e. GOMPlayer: http://www.gomlab.com/eng/GMP_download.html
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- g. The K-Lite Codec Pack (Full): http://www.codecguide.com/download_kl.htm
- h. DirectShowTweaker: http://www.codecguide.com/windows7_preferred_filter_tweaker.htm

1.2 Virtual Care Router Setup

This document will explain how to configure the router out of the box so that it will work with the MMI equipment and in the client's home.

I. Initial Setup:

- a.** Follow the instructions that come with the router. Insert the accompanying dongle into the computer USB port and load the Cisco Connect software. Follow the on screen instructions.
- b.** From the Cisco Connect main screen select the Guest Access option and disable guest access to the router.
- c.** Change the SSID and name of the router to MMI-VirtualCare. Change the password to a designated password.

II. Advanced Settings:

- a.** Enter the router IP address (192.168.0.1. or 192.168.1.1. by default) into the browser URL bar.
- b.** When prompted insert the router's Username and Password into the dialog box.
- c.** Change the router IP address to 192.168.3.1. Click save.

1.3.1 Virtual Care Camera Setup (207W)

*This document assumes that you are accessing the camera through the java applet (i.e., clicking the IP address from AXIS Camera Station Client or typing the IP address directly into a URL bar). Be sure to click Save after making each change. The settings not listed here do not require modification from the factory settings. **For the initial setup, the cameras should be plugged directly into the computer but for subsequent setups the cameras should be plugged into the “Ethernet” port of the router.***

I. Connecting the camera via hardware

1. To add a camera to Axis Camera Station (ACS) click on ‘Add/Edit Cameras’ and then click on ‘search’ to locate the camera.
2. Once the camera appears in the dialog box, click on the link-local address to log into the web browser. Enter the credentials to enter the settings page.
 - a. Username: root
 - b. Password: nazneen (or ‘pass’ if the camera has been configured yet).
3. Once you log into the camera click on “TCP/IP” to find out the camera’s IP address. The IP address must be consistent with the first seven digits of the router it was originally set up with.
 - a. For example, if the IP address in ACS indicates that the camera’s IP address is 169.254.175.234 and the router IP address is set at 192.168.3.1, in the web browser you must change the camera’s IP address to be consistent with the first seven digits (192.168.3.XXX); the last set of digits must vary (e.g., 192.168.3.115).
4. Similarly, the computer settings must also be modified to allow it to communicate with the camera. To modify the computer settings:
 - a. Click on the internet connection in the bottom right-hand corner of the taskbar
 - b. Then click on ‘Open Network and Sharing Center’ and then ‘Change Adapter Settings’
 - c. Double-click the Local Area Connection icon and then click ‘Internet Protocol TCP/IPv4’.
 - d. Next, click on properties and highlight the tab that reads, ‘Use the following IP address’
 - e. At this point, an IP address with the same first seven digits is necessary and the last three digits can vary.
 - i. For example, the computer’s IP address can be 192.168.3.180.

II. User

- a. **User List:** When installing from factory defaults you will need to specify a root user and password.

User:	Password:
root	Nazneen

- b. **Allow Password Type:** Encrypted & Unencrypted

- c. **User Settings:** Do *not* enable anonymous viewer login. Maximum number of simultaneous users limited to **10**.

III. Wireless

- a. **Network Type** is “Master.”
- b. **SSID**, and **Passphrase** should match their corresponding MMI router.

IV. TCP/IP

- a. **Network Interface Mode** is “Auto.”
- b. **IPv4 Ethernet:** Enable IPv4. **IP Address** should be set to 192.168.3.113 for Camera 1 and 192.168.3.115 for Camera 2. **Default router** should be set to 192.168.3.1 and **Subnet mask** should be set to 255.255.255.0.
- c. **IPv6 Ethernet:** Do not enable IPv6.
- d. **IPv4 Wireless** and **IPv6 Wireless:** Exactly the same as their respective Ethernet (LAN) settings.
- e. **Services:** Enable ARP/Ping Setting of IP Address.

V. Date and Time:

- a. **Time zone:** should be correct for client. Check “Automatically adjust for daylight saving time changes.”
- b. **Time Mode:** Set to “Synchronize with NTP Server.” Click the blue hyperlink “[No server specified](#).” Under **NTP Configuration** use insert the IP address 208.66.175.36. Remember to save before returning to **3. Date and Time**. **Date and time format used in images:** Both should be set to predefined.

VI. Image Setting:

- a. **Resolution:** 640 x 480. **Compression:** 30. **White Balance:** Auto (may need to change later.) **Overlay Settings:** Include both date and time. **Include Text:** Include the set number and camera number (i.e. “Camera 2-3” for set 2 camera 3). **Maximum Video Stream Time:** Unlimited. **Maximum Frame Rate:** 10.

VII. Audio Settings:

- a. **Enable Audio:** Yes, please. **Source:** Microphone. **Input Sensitivity:** High. **Encoding:** AAC. **Alarm Level:** 50%.

VIII. Other Settings:

- a. **System Options > Security > HTTPS:** Click the “create self-signed certificate” button. Fill out the requested information and install the certificate. At the bottom set **Administrator**, **Operator**, and **Viewer** policy to use both “HTTP and HTTPS.” Click set policy. Click save settings.
- b. **System Options> Network> TCP/IP:** Ensure that the HTTP port is set to 80 and the HTTPS port is set to 443.
- c. **System Options> LED:** Set to “normal”, however if a patient is showing strong reactivity or negative reactions to the cameras being recording, it can be set to “OFF” so that it does not have the appearance of being on.

IX. Labeling:

- a.** After the camera has been configured it must be assigned a set number and camera number.
 - i. Camera Labeling:
 - 1. Using a label maker with a small font label each camera “MMI Virtual Care” and “Set X Camera Y.”
 - ii. Other labeling:
 - 1. Create a document describing the labeling conventions for all MMI property being used in virtual care.
- b.** Wires and Accessories:
 - i. Inventory tech items.
 - 1. Acquire additional required items.

1.3.3 Virtual Care Camera Station Configuration

This document will explain how to configure the Axis Camera Station Client to work with the cameras. This setup is most easily accomplished with both of the cameras plugged into the router.

I. Camera Station Setup

- a. Open the Camera Station Client. When prompted, select the radio buttons for Current User and Local Server. Check the box to automatically log in. Log into the server.
- b. The Camera Station Client will need to be licensed if it is not already. To do this click on the gear icon to go to the configuration page. Click on the Licenses option. Click the “add” button and fill in the required information. Click register to complete the registration.

II. Adding Cameras

- a. Select the Add/Edit Cameras option from the configuration page or drop-down menu. Click the “Add” button. Insert the name and address of each camera as follows such that x is the Set Number.

Name:	Address:
Set x: Camera 1	192.168.3.113
Set x: Camera 2	192.168.3.115

- b. The port should remain at 80. Under Credentials select the “use specific credentials” radio button and insert the user name and password for the cameras. Click the “OK” button.

Pre-Delivery

2.1 Pre-Delivery Checklist

Ensure that this set of virtual care equipment contains:

- 1 Computer
- 1 Computer Power Cord
- 1 Router
- 1 Router Power Cord
- 2 Cameras (Labeled 1 and 2)
- 2 Camera Power Cords
- 2 Camera Power Cord Extenders.
- 2 Blue Ethernet Cables
- “Computer and Camera Installation Guide”
- 9 medium size double lock Command Strips and 3 screws
- 2 C-Clamp mounts
- 2 Screw mounts, each with 3 Command Strips affixed.
- 1 Headset for Live Feedback/Role Play.
- 1 Bluetooth Dongle for Headset
- Completed Equipment Loan Log

Preparation of Equipment:

- ☐ Confirm that the computer, router, and camera usernames and passwords all correspond with those recorded in the equipment log by successfully logging into each device.
- ☐ Check that both cameras and no additional cameras are registered in the AXIS Camera Station Client and that both are working correctly by wirelessly viewing a live feed from each.
- ☐ Confirm that the hard drive does not contain any recordings from previous patients. You cannot delete the record from the recordings log in the axis client station, but you can delete the data manually.
- ☐ Confirm that Windows and anti-virus definitions are up to date.
- ☐ Confirm that LogMeIn is functional by accessing the computer through the logmein website from another computer.
- ☐ Confirm that computer is charged and the wireless adapter is turned on.
- ☐ Set the paired router’s wireless network as a preferred network.
- ☐ Confirm that power options are set to “never” standby or turn off hard disks and that lid closing and the sleep button are set to “Do nothing” in the advanced tab.
 - ☐ Under the “Advanced Settings” for the power options, modify the values for “Hard drive” and “Sleep” functions to “never”.
- ☐ Shut down computer.

In-home Installation

3.1 Virtual Care Quick Setup:

This section is written to describe the set-up process by MMI staff and assumes that all of the cameras, computer, and router have already been configured according to their respective set up instructions.

Quick Set up:

- I.** Plug Ethernet cable into the “Internet” port of the MMI router and the “Ethernet” port of the client router. Plug power MMI router into power outlet, preferably a surge protector.
 - a.** Ensure the Ethernet cables are plugged into the correct ports.
 - i. One end of the cable must be inserted into a numbered port on the family’s router. The other end of the cable must be inserted into the “Internet” port on the MMI router.
 - ii. One end of a separate cable from the MMI router must be inserted into a number port and the other end of the cable must be inserted in the MMI laptop Ethernet port.
- II.** Plug in and turn on computer.
 - a.** Ensure all power cords (i.e., computer, camera, and routers) are in a location that will not be tampered with.
 - b.** Confirm the MMI laptop is connected to the client’s router.
 - i. Open an internet browser to verify internet connection.
- III.** Mount cameras in position and then plug them in.
 - a.** Allow cameras 1-5 minutes to find network.
 - b.** Verify their connection using Axis Camera Station Client or using their IP addresses in a browser.
- IV.** Viewing
 - a.** Is an object limiting our view of the room?
 - b.** Is a fan moving which would increase our file size?
 - c.** Is the camera positioned towards a light source?
 - d.** Will we capture the behavior from where the camera is located?
 - e.** The camera should only be capturing the room it is placed in.
- V.** Verify Log-Me-In software.
 - a.** Look in bottom right to see that Log-Me-In Hamachi and Remote Access are both showing connection to the server.
- VI.** Set up port forwarding.

Note: Router interfaces differ by make and model and, you may be required to use a separate application to access some routers. www.portforward.com is a good recourse to consult.

- a.** From a browser: 192.168.3.1 -> “Status” tab
- b.** Record the “Internet” IP address, which should be 192.168.x.y.

- c. Go to the external router control page which should be 192.168.x.1. or listed under “default gateway.”
 - i. Log in, if the client does not know the password/username look up the default online. Convince them to change it if it is unsecure.
 - ii. Go to Port Forwarding, which may be under “Applications and Games,” a similar tab, or its own section.
 - 1. Add the following ports:
 - 2. External: 2500 | Internal: 2500 | Both | 192.168.x.y | Enable
 - 3. External: 2501 | Internal: 2501 | Both | 192.168.x.y | Enable
 - 4. There may only be one option for port (not an external or internal.) The IP Address should be the same as the one from the MMI Router Status tab.
 - 5. Save settings.
- d. Go to the Camera Page: 192.168.3.113. Go to TCP/IP setup. Click on Axis Dynamic DNS Service Settings. Click remove registration. Click register. Save settings.
- e. Repeat with second camera: 192.168.3.115.

VII. Verify Camera Operations

- a. Does the camera appear as ‘OK’ in Axis Station?
- b. Can you access the camera settings using the hyperlink in Axis Station?
- c. Are the compression and FPS settings correct?
- d. Is audio recording enabled?
- e. Is the time synchronized to the computer settings?
- f. Are the scheduled recordings correct and is the folder sourced to the right destination (i.e., times of recordings)
- g. Are the cameras focused?
- h. Is there slack on the wall so the plug does not become unplugged?
- i. Is port forwarding functional?
- j. Are the recordings scheduled to be exported?
- k. Is the camera’s wireless adapter nearby the router and is the signal strong (P1344 only)?
- l. Test “lost connection” email notification.

Troubleshooting: Try each step and proceed only to the

- I. Internet Connection: If the computer fails to connect to the internet.
 - a. Verify the computer is attached to wireless network by opening the network management wizard in the taskbar at the bottom right.
 - b. Verify that the MMI router has internet access by checking that the internet light is illuminated on the router and that the Ethernet cable is in the “Internet” socket and not the “Ethernet” socket of the MMI router.
 - c. Verify that your internet connection is active by asking the client to open an internet browser on their personal computer. If the personal computer has an internet connection but the MMI router and computer do not then you may need to adjust the client’s router to allow the MMI router access.

- d. Verify that the cable or DSL modem is receiving a connection by checking the internet activity light on the modem. If this light is not illuminated or is blinking once or twice a second, then the internet outage is not local and the client will need to contact their ISP.

II. Camera Connection: If one or more camera is not accessible to the Axis Camera Client Station.

- a. Verify that the IP addresses for the cameras in the Axis Camera Client Station are correct. (192.168.3.113 and 192.168.3.115)
- b. Unplug the faulty camera, wait a minute, then plug it back in. Verify that the faulty cameras are plugged in securely and the green LED is illuminated. Wait 3 minutes to see if the cameras become accessible.
- c. Using an Ethernet cable, plug the faulty camera into an “Ethernet” port of the MMI router. Allow the camera 3 minutes to become accessible. If the camera does become accessible, then ensure that the camera is properly configured to the wireless network and that the wireless IP address is correctly set in the IP/TCP settings of the camera.
- d. Reset the camera to factory defaults by unplugging the camera, holding the black reset button on the back of the camera, plugging the camera back in and continuing to hold the rest button for 30 seconds.
 - i. The default IP address is 192.168.0.90. You will need to reset the camera credentials the first time you access it and set up the camera according to the Camera Setting Instructions

III. Communicating with the family

- a. Ensure the correct contact information
 - i. Phone numbers
 - ii. Email
 - iii. Do we have their router information (e.g., username, password) and are we able to access it remotely?

3.2 Remote Setup Guide:

This document will explain how to walk participants through the initial setup remotely after receiving their materials.

I. Review Checklist of Materials:

- a. Ensure that the necessary materials have been received by reviewing the following items are unpacked and accessible.
- b. See *Materials* list
- c. If there are missing materials...
 - i. Verify that the equipment was not sent to the home
 - ii. If materials were not sent to home, then problem solve most efficient means of getting materials to the home, i.e., personal delivery, mail missing items

II. General Computer Set-up Guidance:

- a. *Computer Name.* The computer's name should be preselected and verified to match the set to which it belongs. This can be done by selecting the control panel (XP) or by typing "see name of this computer" into the start menu search bar (Vista/Windows 7).
 - i. If the computer is not correctly named, rename the computer by selecting the control panel (XP) or by typing "rename this computer" into the start menu search bar (Vista/Windows 7).
- b. *Username and Password:* The username and password should be preselected and verified by accessing the User settings, which can be accessed by opening the start menu and clicking on the user icon at the top of the start menu. The user name should be set to RemoteSet# to reflect the set it is a part of, i.e., RemoteSet3 for the computer in Set #3. The password should be set to _____.
- c. *Review Power Options:* The computer should be set to never sleep, hibernate, or turn off due to inactivity. Verify that the sleep button and lid closure are set to "do nothing."
- d. Restart the computer if changes were required.

III. Verify Internet Connection & Set-up:

- a. Ensure that the internet light is illuminated on the router.
 - i. If the light is not illuminated then verify that the Ethernet cable is in the "Internet" socket and not the "Ethernet" socket of the MMI router.
- b. Verify that the internet connection is active by (a) opening an internet browser on the personal computer.
 - i. If the personal computer has an internet connection but the MMI router and computer do not then you may need to adjust the client's router to allow the MMI router access.
 - ii. Refer to *Router Set-Up*
- c. Verify that the cable or DSL modem is receiving a connection by checking the internet activity light on the modem and again opening an internet browsing window.
- d. If the computer does not automatically connect to a wireless network, connect to a wireless network by right clicking the wireless network connection icon in the lower right corner of the screen when it appears.
 - i. Select the "View Available Wireless Networks" option (see right picture below).

- ii. Select your wireless network from the list and double click on it.
- iii. Enter your network password when prompted (if applicable). This password was set when your internet connection was installed.
- e. Open an internet explorer window by double clicking the icon on the desktop. If the Munroe-Meyer Institute's website loads, then the computer is properly connected.

IV. General Camera Set-up Guidance:

- a. Have individual insert the blue Ethernet cable into network connector on Camera 1.
- b. Insert the black power cord into power connector on Camera 1.
- c. Plug in the black power cord.
- d. Verify that an orange light on the front illuminates and then turns green to indicate that the camera is properly powered.
- e. Insert the second end of the blue Ethernet cable into the Ethernet jack on the right side of the laptop.

V. Configuring Camera to work with Wireless Router

- a. Open the Axis Camera Station from the desktop
 - i. Click Connect
 - ii. Click OK
 - iii. Axis Station will open
- b. Click on the IP address (the hyper link, highlighted blue) and an internet browser window will open.
- c. Enter user name and password
 - i. User name: root
 - ii. Password: nazneen
- d. Select the TCP/IP link to verify the following:
 - i. **Network Interface Mode** is "Auto."
 - ii. **IPv4 Ethernet:** Enable IPv4.
 - iii. **IP Address** should be set to 192.168.3.113 for Camera 1 and 192.168.3.115 for Camera 2.
 - iv. **Default router** should be set to 192.168.3.1
 - v. **Subnet mask** should be set to 255.255.255.0.
 - vi. **IPv6 Ethernet:** Do not enable IPv6.
 - vii. **IPv4 Wireless and IPv6 Wireless:** Exactly the same as their respective Ethernet (LAN) settings above.
 - viii. **Services:** Enable ARP/Ping Setting of IP Address.
- e. Verify Axis Station camera status changed from "Not Accessible" to "Ok"
- f. Unplug the Ethernet cord from the back of Camera
- g. Allow 1-5 minutes for camera to find network.
- h. Verify connection using Axis Camera Station Client (status should say "OK") or using the IP address in an internet browser window.
- i. Repeat Sections IV and V for Camera 2.

VIII. Verify Log-Me-In software:

- a. Verify that Log-Me-In and Remote Access are both showing connection to the server in bottom right.
- b. Can we access the computer using LogMeIn?

IX. Verify Port Forwarding is Enabled

- a. From a browser: 192.168.3.1

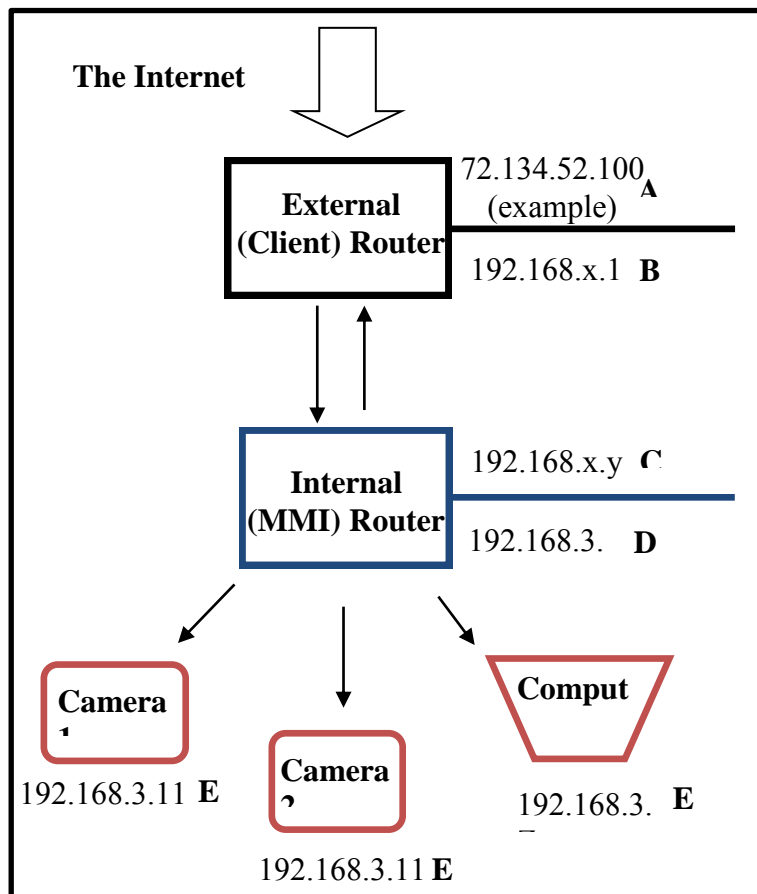
- b.** Click on “Status” tab
- c.** Record the “Internet” IP address, which should be 192.168.x.y.
- d.** Go to the external router control page which should be 192.168.x.1. or listed under “default gateway.”
- e.** Go to Port Forwarding, which may be under “Applications and Games,” a similar tab, or its own section.
 - i.** Add the following ports:
 - 1. External: 2500 | Internal: 2500 | Both | 192.168.x.y | Enable
 - 2. External: 2501 | Internal: 2501 | Both | 192.168.x.y | Enable
 - 3. There may only be one option for port (not an external or internal.) The IP Address should be the same as the one from the MMI Router Status tab.
 - 4. Save settings.
- f.** Go to the Camera Page: 192.168.3.113
- g.** Go to TCP/IP setup
 - i.** Click on Axis Dynamic DNS Service Settings.
 - ii.** Click remove registration.
 - iii.** Click register.
 - iv.** Save settings.
- h.** Repeat with second camera: 192.168.3.115.

3.3 Port Forwarding Guide

This document will explain what port forwarding is and provide directions for setting it up.

Background: Port forwarding is only necessary for live view, roleplaying, or real time feedback.

Routers serve several important functions in a network, but the two that are most relevant to our purposes are their ability to distribute a network to a number of clients as well as their ability to act as a firewall.



The network connection allows the cameras and computer to communicate with each other wirelessly throughout the house while the firewall keeps this communication secure by isolating the internal network from the exterior internet proper. Due to this isolation, the network requires both internal and external IP addresses. The external IP address (an example is given to the left at A) directs the packets of information between the internet and the network but is stopped at the external router. Our cameras, computers, and the internal router use internal IP addresses (D and E) to identify each other and direct packets of information between them. Notice all of the internal IP addresses on a single router network have the same first 3 numbers. While the routers are able to relay information between the internal network and outside internet, all information from the network has

the same external IP address. This makes it very difficult for an outside user, such as a clinician at MMI, to access a direct connection (called a **Port**) with a specific device on the network, such as one of our cameras. Port forwarding allows us to tell the router that information coming to the external IP at a certain port should be directed to a specific internal IP address. Note, the process is made slightly more complicated by the addition of a second router. This adds a second firewall that needs to be worked around.

Directions:

First, we will configure our router so that information arriving at the external IP address, C, for ports 2500 or 2501 be converted to forwarded to port 443 on Camera 1 or 2 respectively, E. To do this we need to use an internet browser to access our router's control setup.

- Enter 192.168.3.1 into the URL. You will be prompted for a login and password. The login is the name of the router. **Note:** The computer must be connected to the MMI router for this to work.

Click on the "Applications and Games" tab. Enter the following information into the table below:

External Port	Internal Port	Protocol	IP Address:
2500	443	Both	192.168.3.113
2501	443	Both	192.168.3.115

- Click the “Save Settings” button at the bottom. Once the settings have been saved click on the “Status” tab at the far right. Record the “Internet IP Address,” this is the external address for the router.

Next we will need to configure the client’s router to direct information arriving at port 2500 or 2501 of the external IP address, **A**, to the same port of the second router’s external IP address, **B**. To do this we will need to access the client’s router setup.

- The router can be accessed by entering the Internal IP Address of the router into the URL bar of a browser. The internal IP address is likely 192.168.x.1 such that 192.168.x.y. is the external IP address of the MMI Router. You will need a login and password for the router, which should be found on the Pre-Installation Questionnaire. **Note:** The computer must be connected to either the client or MMI router for this to work.
- Every make and model of router has slightly different interface, so you will need to find the port forwarding section of the interface. The port forwarding should be configured as below:

External Port	Internal Port	Protocol	IP Address:
2500	2500	Both	192.168.x.y.
2501	2501	Both	192.168.x.y.

- The syntax for port forwarding may differ from router to router. You may not be able to set an internal port distinct from the external port or it may not ask about protocols. In any case, the important factor is that ports 2500 and 2501 are routed to the external IP address of the MMI router. **Note:** Be sure to save the settings before leaving the port forward set up page.
- You will need to record the external IP address of the client’s router. To do this, either access the status tab of the router interface or go to www.wimi.com.

Finally, we will need to ensure that the cameras are configured to use the HTTPS and that they can be found. To do this we will need to access the camera control page by entering their IP addresses into the URL bar: they should be set to 192.168.3.113 and 192.168.3.115.

- Go to Setup> System Options > Security> HTTPS. If there is not already a certificate installed, then click on the “Create Self Signed Certificate” button. Fill in the requested information and install the certificate. At the bottom confirm that Viewer, Operator, and Administrator are all set to use “HTTP and HTTPS” or “Encrypted and Unencrypted.” Click set policy, then click save settings.
- Go to setup> System Options> Network> TCP/IP. Click on Axis Dynamic DNS Service settings. Click the “remove registration” button to clear any previous registrations, click the “register” button, and then save settings.
- Go to setup> System Options> Network> TCP/IP> Advanced. Confirm that the HTTP port is set to 80 and the HTTPS port is set to 443.

To confirm that port forwarding is successful you will need to enter the external IP address of the client router into the URL and indicate the port to access. To access camera 1 at our example network you would enter <https://74.134.52.100:2500> into the URL. **Note:** You must include the https:// or the computer will assume http:// and will not work. Also there should be no punctuation after the “:2500”.

3.4 Virtual Care E-Mail Notification

This document explains how to configure the Axis Camera Station Client to send an e-mail to a designated e-mail address whenever it loses connection with a camera.

In the Axis Camera Station Client, click on the “Options” drag down menu and go to SMTP servers. If one is present, select it and click edit, otherwise click add. Enable authentication, disable “Use SSL” and confirm the following settings:

Address:	smtp.gmx.com
Port:	587
Your Name:	Computer # (i.e. Computer 2 for set 2)
E-mail Address:	MMIVirtualCare@gmx.com
User Name:	MMIVirtualCare@gmx.com
Password:	virtualcare3

In the Axis Camera Station Client, click on the “configuration” drop down menu, select event configuration. Confirm that a rule exists such as follows where # is the set number:

Triggers:	On full disk
Schedule:	Always on
Actions:	Send e-mail “VC Error Computer # Full Disk” to “[insert e-mail address]”

Triggers:	On lost connection to “Camera #-1”
Schedule:	Always on
Actions:	Send e-mail “VC Error Camera #-1 Disconnect” to “[insert e-mail address]”

Triggers:	On lost connection to “Camera #-2”
Schedule:	Always on
Actions:	Send e-mail “VC Error Camera #-2 Disconnect” to “[insert e-mail address]”

Operational Protocols

4.1. Camera Operations Guide

I. Scheduling Recordings:

- a. Open the AXIS Camera Station Client. Select recording settings. Select camera 1 and click on the “continuous” button.
- b. Check the “Enabled” box. **Note:** This box is not enabled by default, and the camera will not record as scheduled unless it is checked.
- c. Under Video Settings click on the “Change...” button. The Format should be set to MPEG-4. Resolution to 640x480. Compression to 30. Framerate should be set to 10. Check the box next to Audio. Click “OK.”
- d. Select the radio button next to “custom schedule:” and click the “New...” button. Name the schedule “Client XY” where X and Y are the first and last initials of the client. Select the times you wish to schedule the recording. Click “OK.” **Note:** Only the times shaded in blue will be recorded.

II. Exporting Video:

a. Manual Export:

- i. Click on the film reel icon to go to the recordings management page.
- ii. Enter the time interval from which you want to export the recordings and click search.
- iii. Right click on the desired recording and click Export Recordings.

b. Scheduled Export:

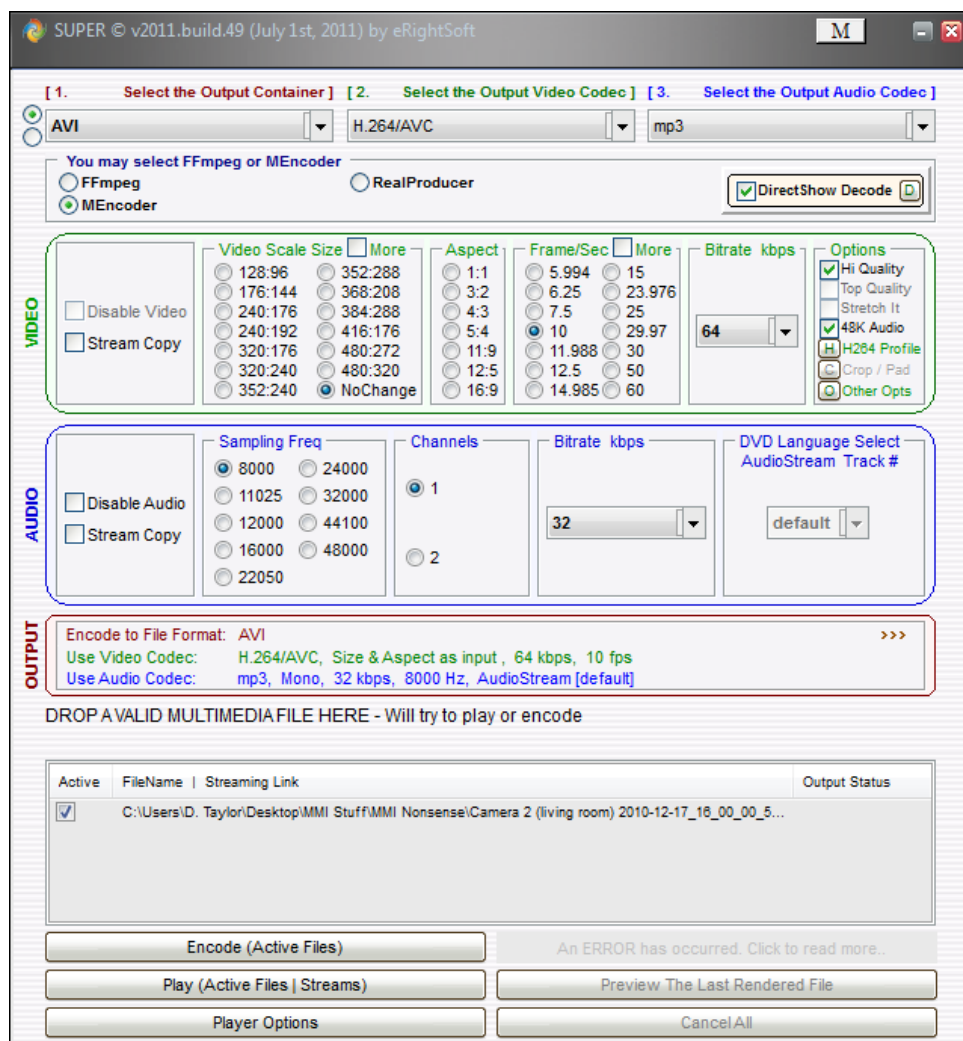
- i. Under the configuration dropdown menu select the “Schedule Recording Export” option. Fill in the requested information to schedule your recording export.

4.2 Video Processing Guide

This document will explain how to use the SUPER and AviSynth Software to process the videos.

I. Compression and Conversion with SUPER:

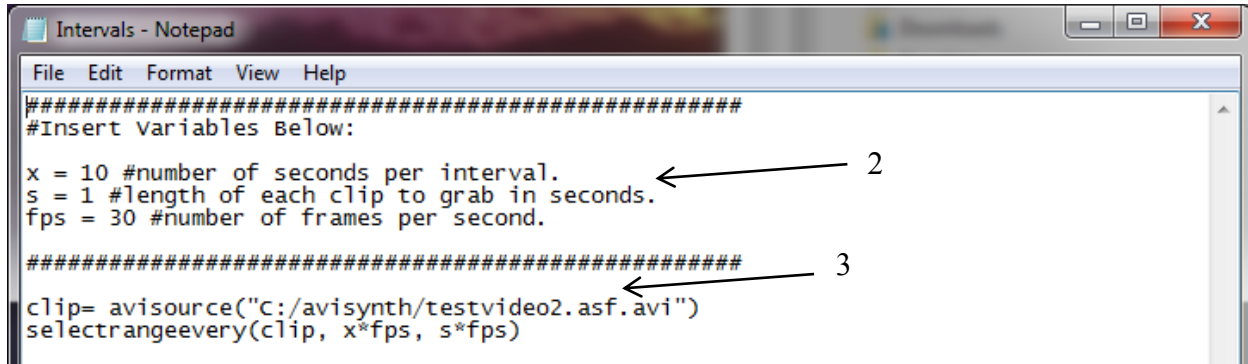
- Open the SUPER program. If a dialog box appears asking to allow the program to make changes, click “Yes” or “OK”.
- Locate the input file and drag the file onto the “Drag a valid multimedia file here” section.
- Select the output container as .avi, the output video codec as H.264/AVC, and the output audio codec as “mp3”. Select “MEncoder” and check the “DirectShow Decode” box.
- Under video scale size, select no change. Select the desired frame/sec (10) and bitrate (64kbps).
- Under audio, select 8000hz as the sampling frequency, 1 channels, and the bitrate of 32kbps.
- Click encode. **Note:** Be sure to close SUPER completely once the encoding is completed.



II. Momentary Time Sampling with AviSynth:

- Right click the “Intervals.avs” file and select “Open with Notepad.”

- b. Change the variables at the top of the script to match the number FPS and desired proportions of frames to select.
- c. Ensure that the name and path of the target video are correct.
- d. Save the script and close notepad.
- e. Drag the “Intervals.avs” file into SUPER as you would a regular video.
- f. Ensure that the settings are correct. Normally they should match the settings of the target video.
- g. Click Encode.
- h. Be sure to close SUPER completely once the encoding is completed.



```

Intervals - Notepad
File Edit Format View Help
#####
#Insert variables Below:
x = 10 #number of seconds per interval.
s = 1 #length of each clip to grab in seconds.
fps = 30 #number of frames per second.
#####
clip= avisource("C:/avisynth/testvideo2.asf.avi")
selectrangeevery(clip, x*fps, s*fps)
  
```

The screenshot shows a Notepad window with the title "Intervals - Notepad". The menu bar includes "File", "Edit", "Format", "View", and "Help". The text content is an AVS script. It starts with a line of hash characters, followed by a comment "#Insert variables Below:". Then there are three lines defining variables: "x = 10 #number of seconds per interval.", "s = 1 #length of each clip to grab in seconds.", and "fps = 30 #number of frames per second.". This is followed by another line of hash characters. The final two lines are "clip= avisource(\"C:/avisynth/testvideo2.asf.avi\")" and "selectrangeevery(clip, x*fps, s*fps)". An arrow labeled "2" points to the line "s = 1 #length of each clip to grab in seconds.". Another arrow labeled "3" points to the line "clip= avisource(\"C:/avisynth/testvideo2.asf.avi\")".

Note: This is the entire script necessary. The script must be saved as an .avs file not a .txt file or it will not work. The script as written will only work on an .avi file. If creating a new script right click the desktop and select “AviSynth Script” under the “New” dropdown menu.

4.3 VPN Guide

This document provides information about the use and operation of the Hamachi VPN.

Manual Transfer of Files:

From the Desktop / Hub Computer open the Hamachi client. Right click on the computer you wish to access and select the “Browse” option. A dialog box may appear asking for a username and password. The username and password are the same as the Windows username and password used to log into the computer you are trying to access. Locate the file you wish to transfer and drag it to a folder on the desktop or on the attached network drive. Multiple files can be dragged at one time and will be automatically transferred sequentially, however do not start a new transfer until the current one has completed.

Remote Access:

You can use the VPN to access and control a remote computer. To do this you must be working from a computer with Windows 7 installed. Open the start menu and type “remote desktop” into the search bar. Open the application entitled “Remote Desktop Connection.” In the field labeled “computer” enter the Hamachi VPN IP Address of the computer you wish to access. This IP address will start with a 5. A dialog box may appear asking for a username and password. Enter the username and password of the Windows User on the remote computer you wish to access.

- a.** Is the VPN functional and can we access the Video Recordings folder?

Equipment Shipping

5.1 Shipping

1. Packaging:
 - a. Ensure all items from the [inventory checklist](#) are packed into a box.
 - b. Packing materials.
 - c. Box size.
 - d. Package organization.
 - i. Inventory list incorporated into “Virtual Care Predelivery”
2. Shipping options:
 - a. Carriers.
 - b. Insurance.
 - c. Costs.

7.1 Pre-Installation Questionnaire

Munroe-Meyer Institute's Virtual Care Pre-Installation Questionnaire

In order to prepare the virtual care equipment to work best in your home, we need some information about the current set up of your computer's network.

DSL, Cable, Satellite, or Dial-Up connection: Choose an item.

There are a number of different types of internet access. If your computer gets high speed internet through a phone company and plugs into a phone line, then it is probably **DSL**. If it comes through a cable line like the one going to your TV, then it is **Cable**. If your internet uses a satellite dish to receive a signal, then it is **satellite** internet. If your internet is not always on and your computer needs to make a phone call to connect then, then it is called **dial-up**. If you are unsure, please contact your internet service provider.

Internet Service Provider or ISP: Click here to enter text.

Please record your internet service provider above.

Wireless or Wired: Choose an item.

Does your computer need to be physically **wired** to a modem, router, or Ethernet jack in order to access the internet or can you access the internet **wirelessly**?

Router brand and model number: Click here to enter text.

A **Router** is a small box that is attached to your modem and allows multiple devices to access the internet. This is also the component that creates a wireless network. It should be labeled with a brand such as Cisco, Linksys, or Netgear. **If you have changed the router's access username and password from the default, please have this information ready.**

Router Username: Click here to enter text. **Password:** Click here to enter text.

Speed Test Upload: Mbps

Speed Test Upload: Mbps

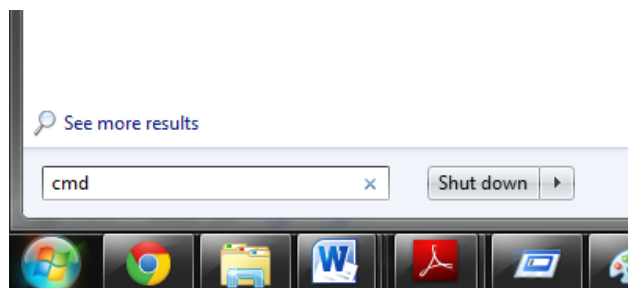
In order to determine which equipment is best for you, it helps to know the speed of your internet connection. To measure this, please go to www.speedtest.net and click the "Begin Test" button. Record the results above.

IP Address: 0.0.0.0 **Default Gateway:** 0.0.0.0

An **IP Address** is a set of numbers which act like a name for your computer (e.g., 192.168.0.100.) We need to know the IP Address of your router, which is referred to as the Default Gateway, in order to set up the equipment. To find the Default Gateway, go to the start menu. In Windows XP go to "Run" (pictured on the reverse to the left) and then type "CMD" without the quotations and click ok. In Windows Vista or Windows 7 type "CMD" without the quotations into the start menu search field. (Pictured on the reverse to the right)



Windows



Windows

Once the command prompt has opened, type “ipconfig” without the quotation marks and hit enter. Your IP Address and Default Gateway should be listed similarly to the picture below.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Jason>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address. . . . . : 192.168.0.50
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1

C:\Documents and Settings\Jason>
```

7.2 Equipment Loan Log

MMI Virtual Care Equipment Loan Log

Client Name:

Home Phone:

Address:

Cell Phone:

E-Mail Address:

Equipment Information:

Equipment:	ID:	Date Sent:	Date Returned:
Computer			
Router			
Camera 1			
Camera 2			
Headset			

Additional Equipment Loaned:

Equipment:	Quantity Sent:	Quantity Returned:
Computer Power Cord	1	
Router Power Cord	1	
Camera Power Cord	2	
Camera Power Cord Extender	2	
Blue Ethernet Cable	2	
Camera Mount (C-Clamp)	2	
Camera Mount (Conical)	2	
USB Headset Dongle	1	

I have received the equipment listed above and acknowledge that said equipment remains the property of the Munroe-Meyer Institute. Furthermore, I am responsible for the safe return of the equipment to the Munroe-Meyer Institute upon the completion of the virtual care program.

Client Signature

Date

7.3 Staff Competencies

Sigma Plot

- ☐ Reversal two data paths
- ☐ Multiple base line design
- ☐ Stacked bar graph

- ☐ Cisco Router
 - ☐ Change SSID and name of the router
 - ☐ Change password
 - ☐ Change IP address
 - ☐ Reset factory router

- ☐ 207 W
 - ☐ Change default username and password
 - ☐ Change date and time
 - ☐ Enable audio
 - ☐ Create a https
 - ☐ Change LED settings
 - ☐ Set up port forwarding

- ☐ M1031 W
 - ☐ Change default username and password
 - ☐ Change date and time
 - ☐ Enable audio
 - ☐ Create a https
 - ☐ Change LED settings
 - ☐ Set up port forwarding

- ☐ P1344
 - ☐ Change default username and password
 - ☐ Change date and time
 - ☐ Enable audio
 - ☐ Create a https
 - ☐ Change LED settings
 - ☐ Set and adjust infrared settings
 - ☐ Adjust motion detection settings
 - ☐ Use light meter
 - ☐ Set up to be wireless
 - ☐ Set up port forwarding

- ☐ Access camera station
 - ☐ Add license
 - ☐ Add cameras

- ☐ Set up email notification
- ☐ Set image settings
- ☐ Scheduling recordings
- ☐ Scheduling exports
- ☐ Manual export

- ☐ Go to meeting
 - ☐ Start a meeting

- ☐ Adobe connect pro
 - ☐ Start a meeting
 - ☐ Up load files

- ☐ Super compression and conversion software
 - ☐ Change bitrate for video
 - ☐ Change bitrate for audio

- ☐ AviSynth
 - ☐ Set up momentary time sampling

- ☐ Adobe presenter
 - ☐ Import audio
 - ☐ Import video
 - ☐ Publish presentation

- ☐ Log me in Hamachi
 - ☐ Add computer
 - ☐ Manual transfer of files
 - ☐ Remote access

7.4 Software Troubleshooting and Frequently Asked Questions

Relevant Category or Program	Problem	Solution

Adobe Presenter	Publishing to Adobe Connect server (Server error: 404 Not Found) 42006 Presenter Publication Error-Exception	Publish to your computer and check “zip package” then upload the zipped file to the server.
	Modifying time between slides (Settings)-Can only be applied to all slides, not individual slides	None
	Adding a complete quiz at the end of a presentation rather than embedded within an individual slide.	None
	Adobe Presenter will not preserve PowerPoint slide animations	When recording audio, select ‘next animation’ between talking points.
	File will not publish	Save as PowerPoint 1997-2003 file format
AVISynth	Cannot play video; Error Code 3	Try altering your code to include a different front command (i.e., instead of “AVISource” try “AVIFileSource”, “DirectShowSource”, or “DirectMBL”).
	Unidentified syntax (Error code 2 an 9a)	Make sure you have # signs above and below the comments you have in the syntax (e.g., number of frames to be extracted, playback speed, etc). If you do not identify the comments by these # signs, AVISynth will try to read them as code and will return this error.
	“Video Not Returned” and/or “Audio Not Returned” error messages	Double-check your spelling. This is the most likely reason for these error messages.
	File Not Found	Check to make sure you have the ENTIRE file path written out in your syntax. A good way to avoid errors here would be to copy the file path directly from the file properties window.
AXIS Cameras	Router IP address keeps changing.	Open your router set-up (via either your installed program or a web browser) and make sure you have a STATIC (not DYNAMIC) IP address set. NOTE: This setting is listed under general settings for most routers.
SUPER©	File Error (during import)	Check to make sure that the file extension is one of the following: .avi, .wmv, .asf, .mp3. If the extension is anything else (i.e., .mov, .mp4)

		change the file extension to one of the approved extensions and try again.
Windows Media Player	Program keeps closing when attempting to open videos.	Try altering the file size (i.e., kpbs) using the SUPER© compression program (i.e., change file from 324 kbps to 64 kbps).

7.5 Web-Conferencing Platform Task Analyses

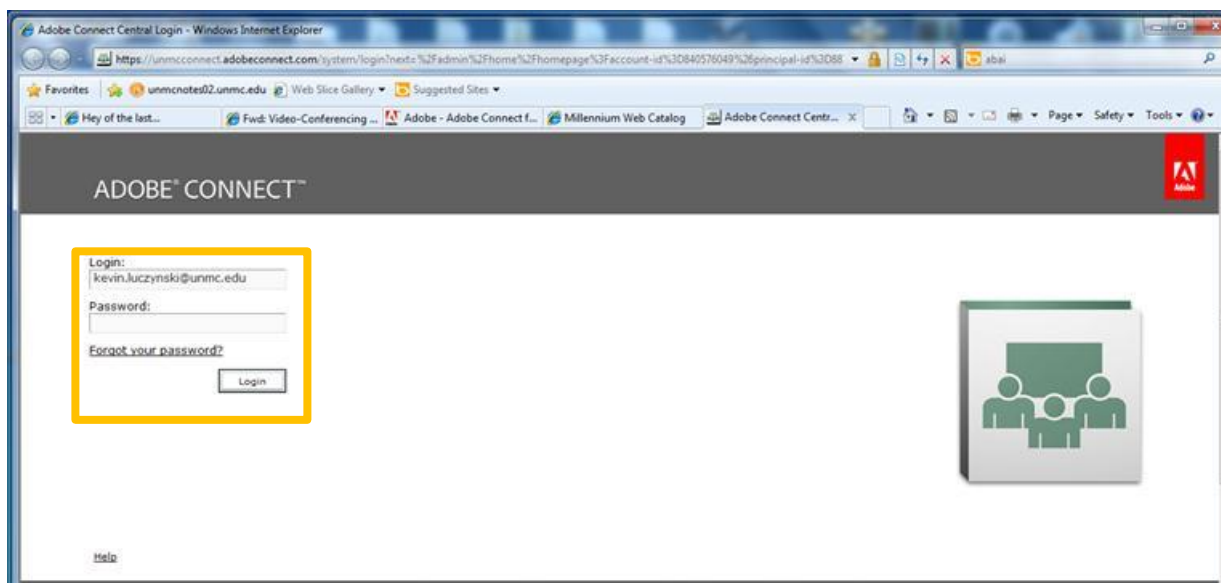
This section of the manual provides an overview of the web-conferencing platforms commonly used to conduct virtual care services.

7.5.1 Adobe Connect

Adobe Connect Pro Initial Setup of Audio, Visual, and Microphone

Initial log in information

- Go to <https://unmcconnect.adobeconnect.com/admin/home/homepage?account-id=840576049&principal-id=887233435&showNotif=true>
- Please enter user name and password
- User name: kevin.luczynski@unmc.edu
- Password: mmiconnectpro



How do I enter a meeting room?

Select a meeting room and click open.

ADOBE CONNECT

My Profile | Help | Logout: Kevin Luczynski

Home | Content | Meetings | Reports | Administration

Create New: MEETING | CONTENT

My Calendar | My Meetings | Resources

My Meetings View

Name	Sta...	Role
VirtualCareTest	08/...	Host
Dr. Kelley's Meeting R...	01/...	Host
MML_	12/...	Host
Kevin Luczynski	10/...	Host

VirtualCareTest Overview

Name: VirtualCareTest

URL: <http://unmconnect.adobeconnect.com/virtualcaretest/>

Summary: VirtualCareTest

Start Time: 08/09/2011 2:30 PM

Duration: 02:00

Language: English

Conference Numbers:

Participant Code:

How do I have a family join the meeting room?

Step 1: Please send this link to the family and have them open it and sign in as a guest, for this they just need to type in a name.

ADOBE CONNECT

My Profile | Help | Logout: Kevin Luczynski

Home | Content | Meetings | Reports | Administration

Create New: MEETING | CONTENT

My Calendar | My Meetings | Resources

My Meetings View

Name	Sta...	Role
VirtualCareTest	08/...	Host
Dr. Kelley's Meeting R...	01/...	Host
MML_	12/...	Host
Kevin Luczynski	10/...	Host

VirtualCareTest Overview

Name: VirtualCareTest

URL: <http://unmconnect.adobeconnect.com/virtualcaretest/>

Summary: VirtualCareTest

Start Time: 08/09/2011 2:30 PM

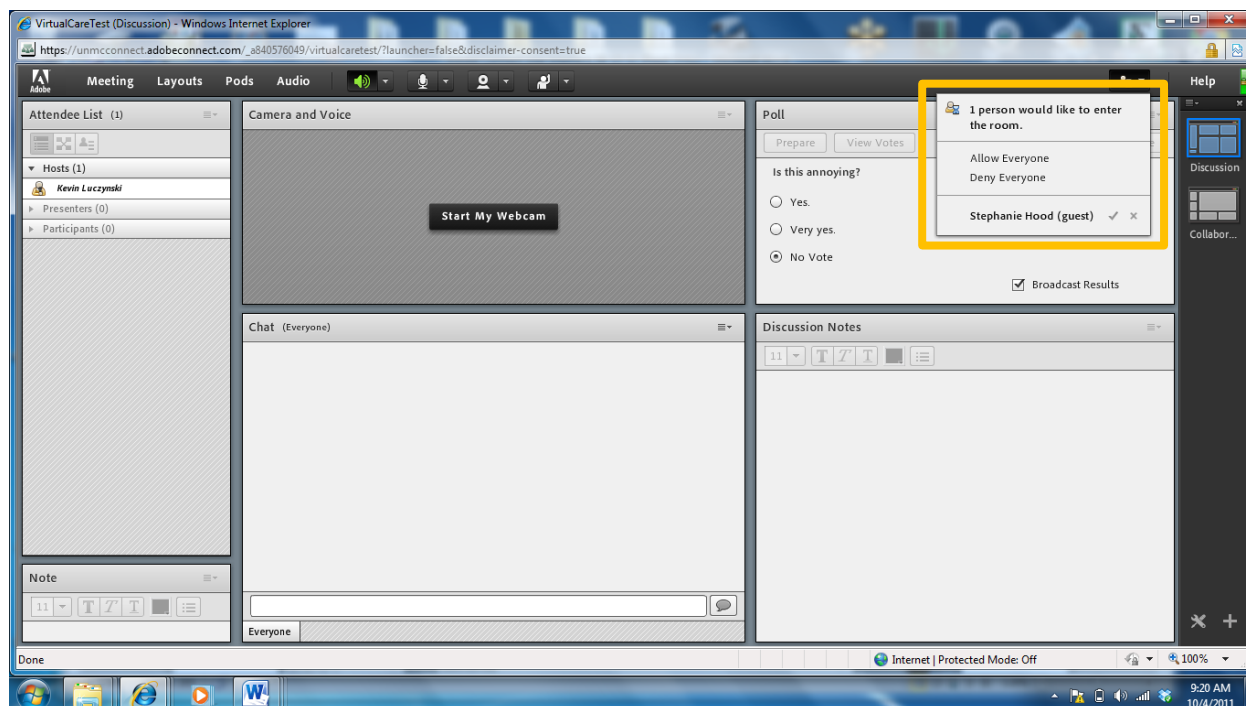
Duration: 02:00

Language: English

Conference Numbers:

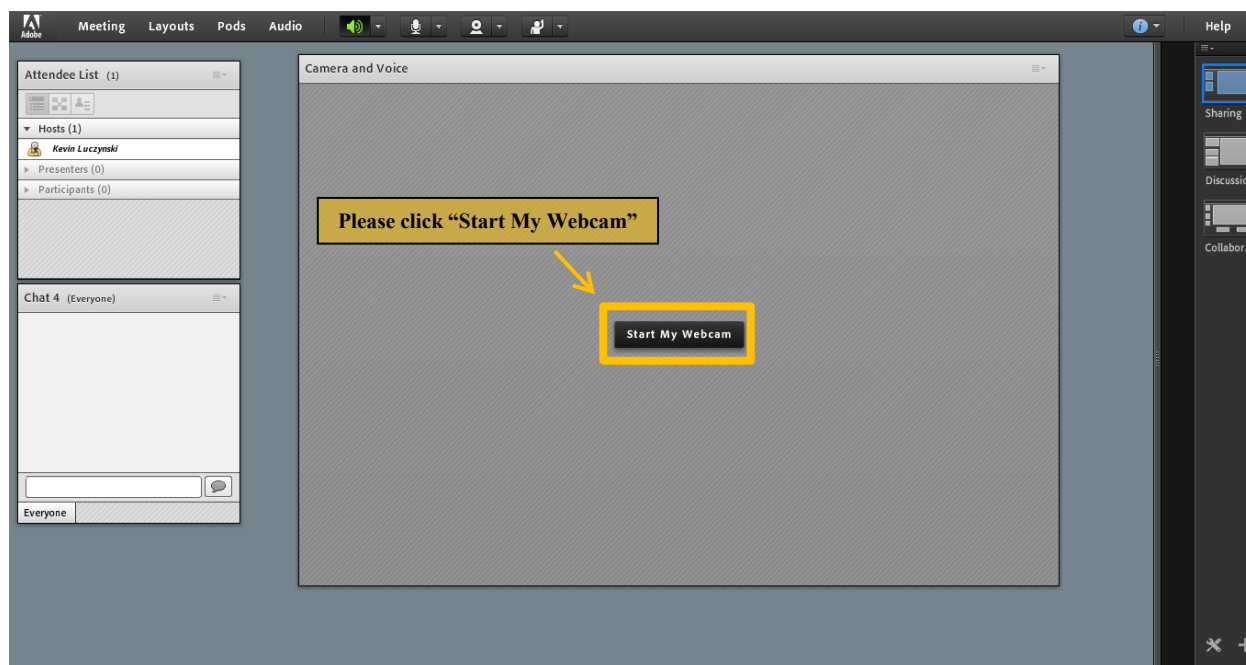
Participant Code:

Step 2: The meeting manager must accept the family into the room by clicking on the check mark next to the guest's name.

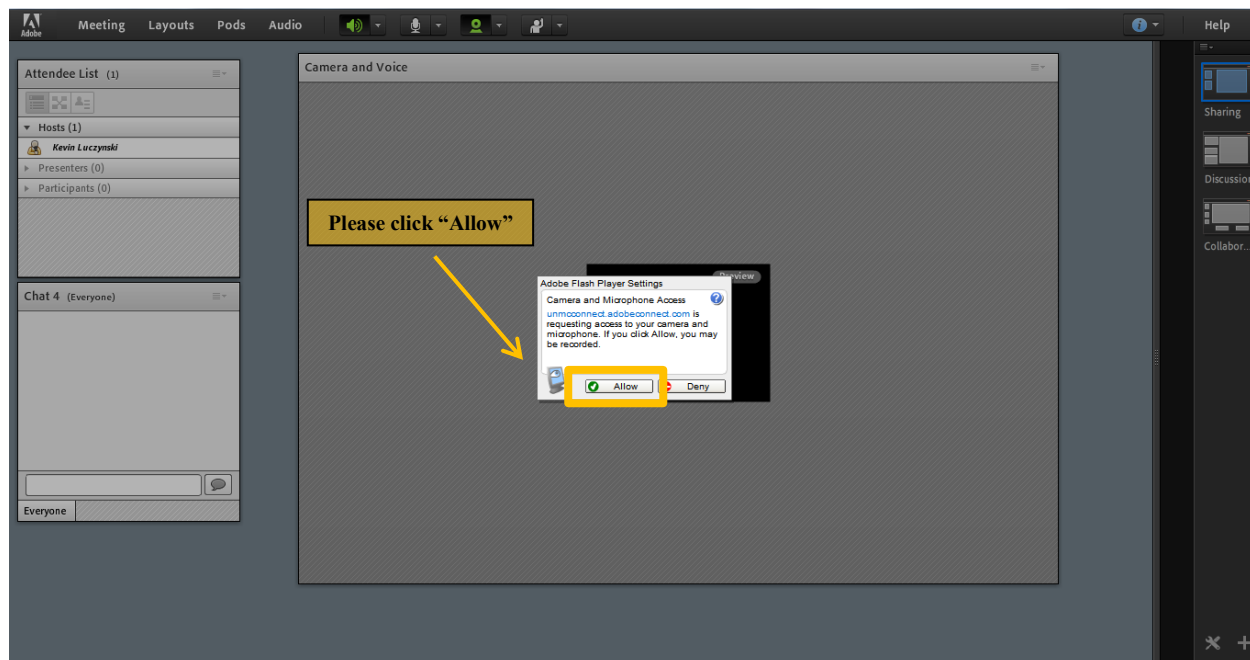


How do you start your webcam?

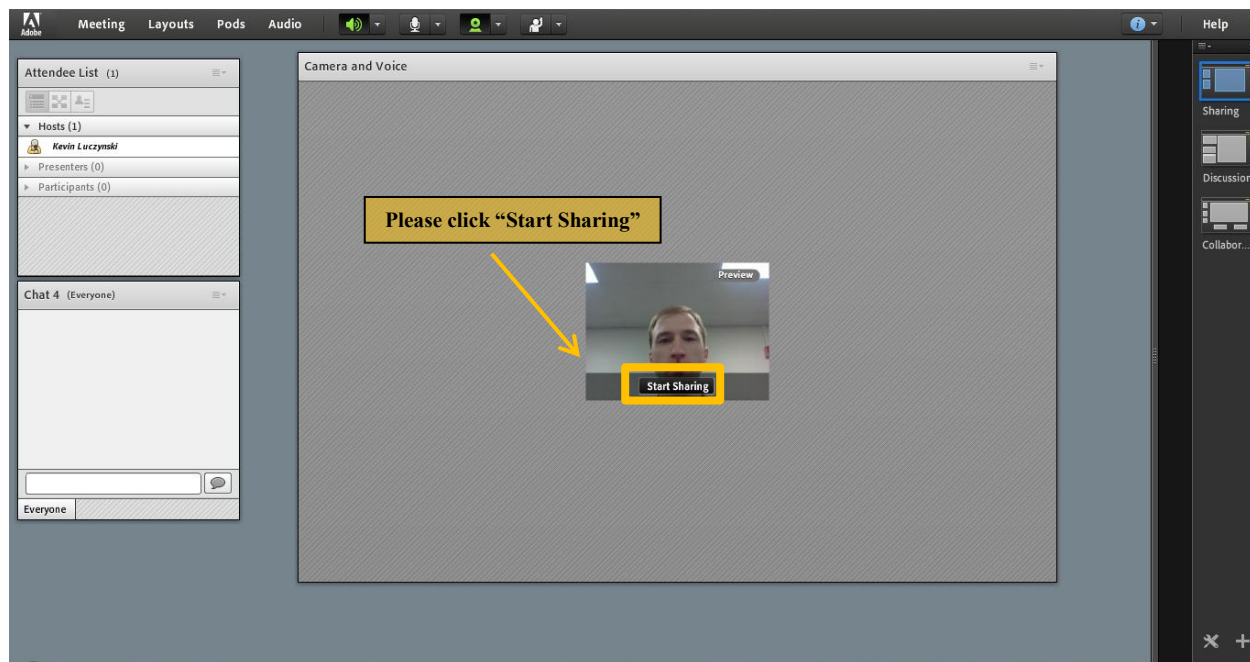
First Step:



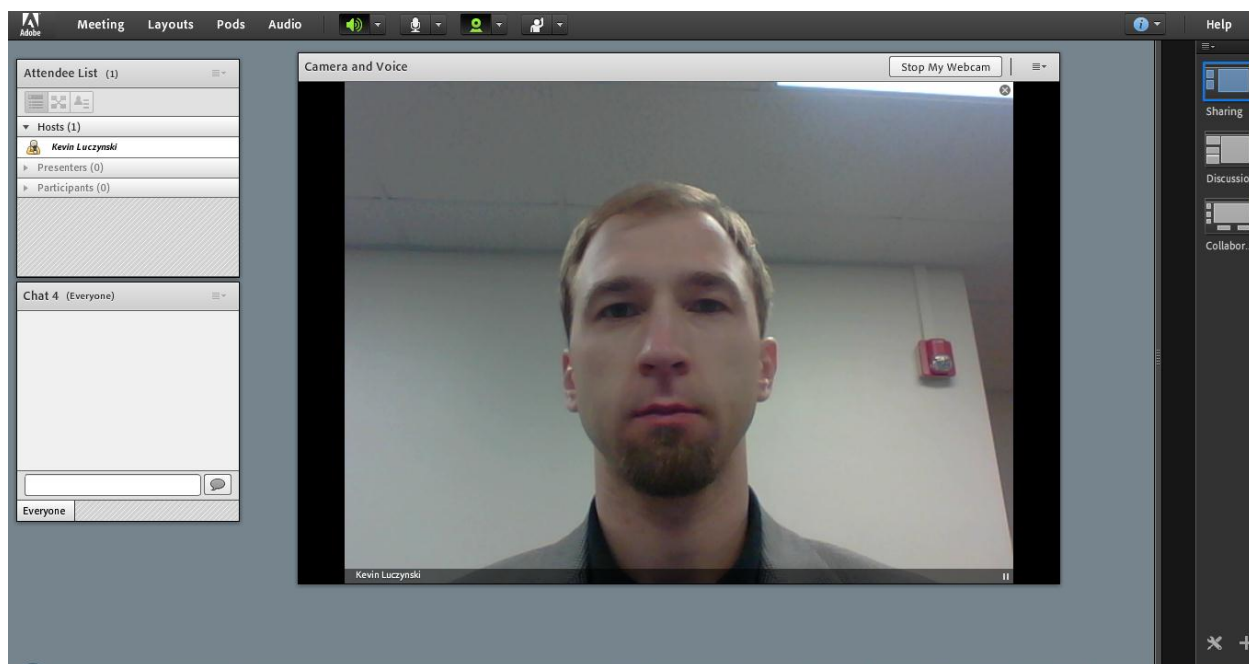
Second Step:



Third Step:

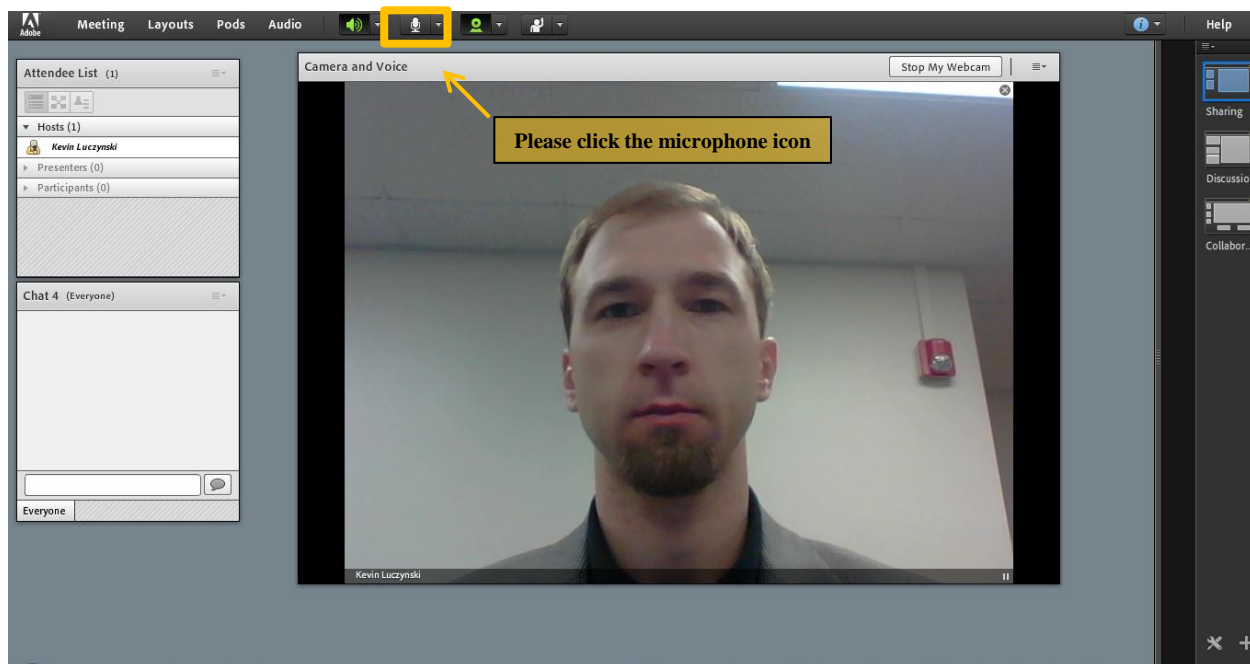


Fourth Step: At this point, your video feed will activate and other members of the meeting room will be able to see your video.

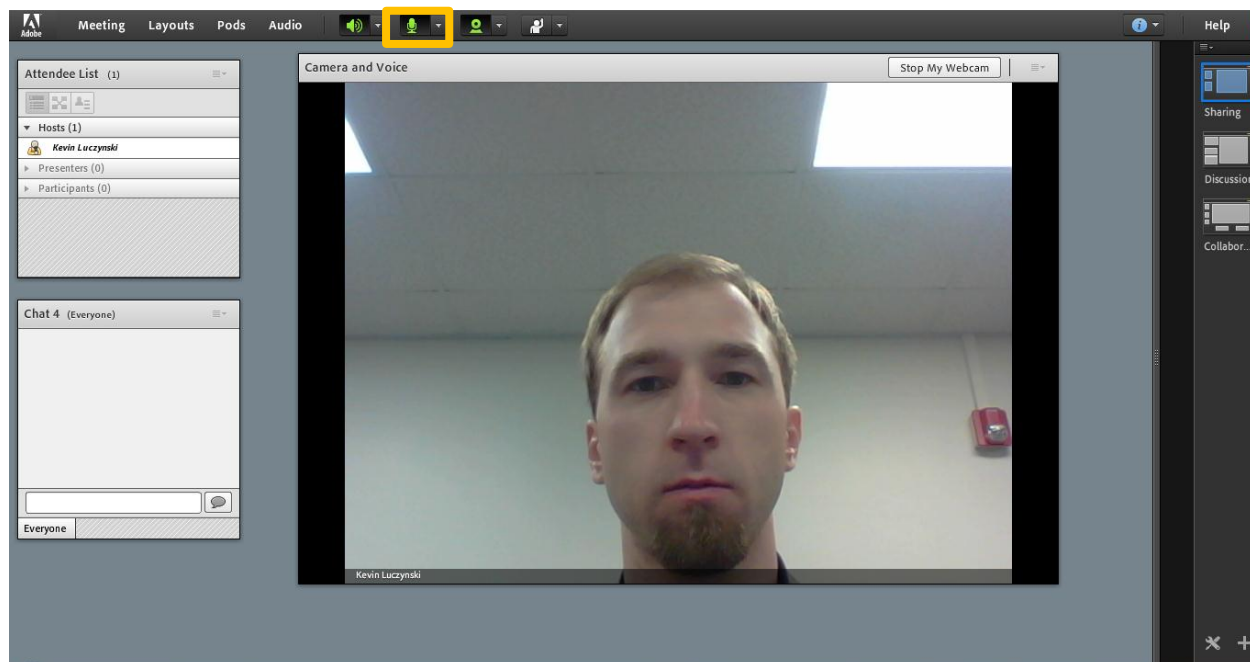


How do you start your microphone?

First Step: Locate the microphone icon on the tool bar and please click on it.

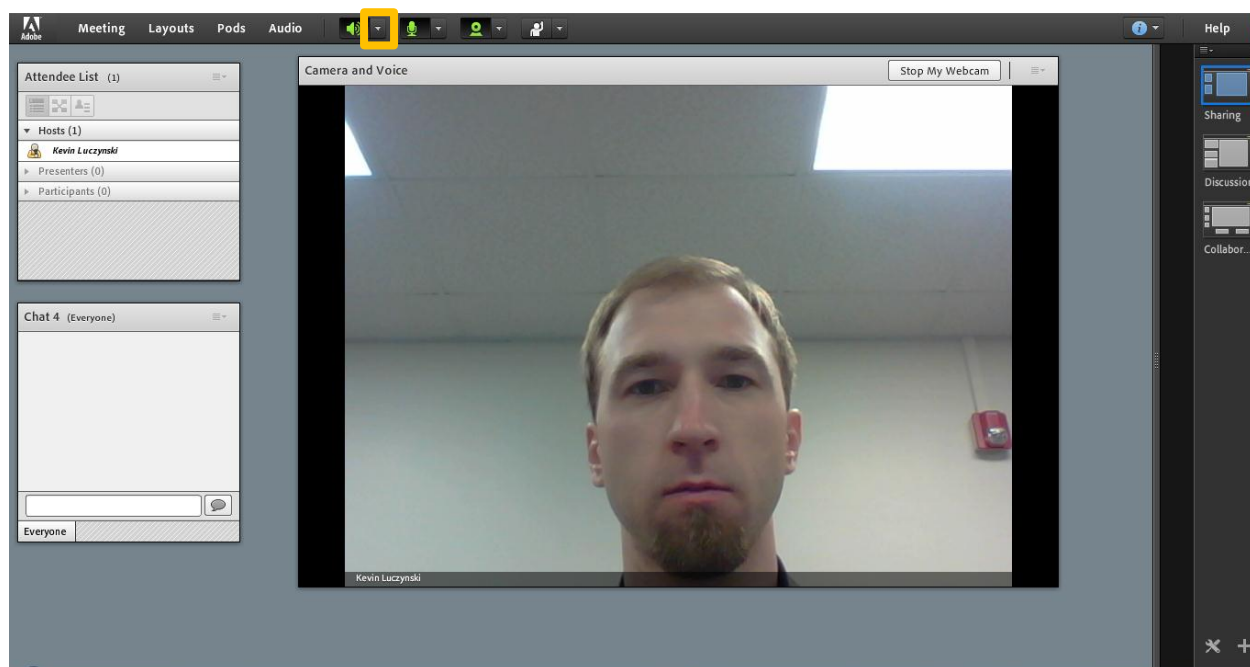


Second Step: After clicking the microphone icon, it will turn green.

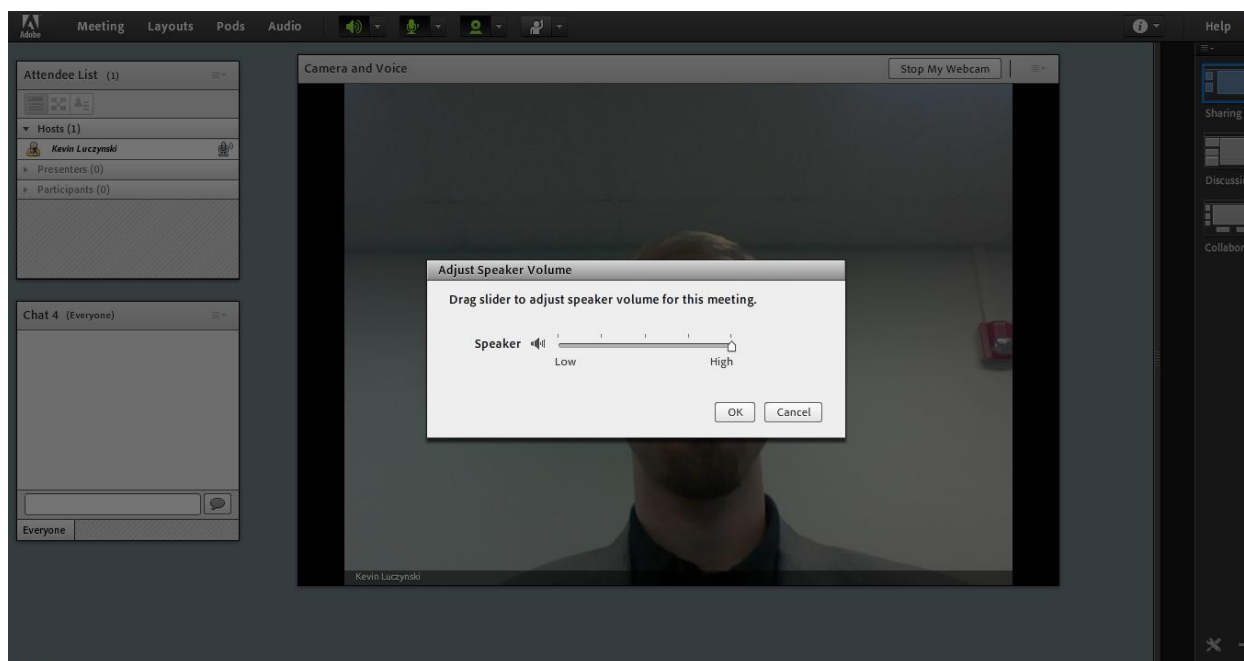


How do you adjust the speaker volume?

First Step: Please click the arrow next to the speaker icon as highlighted by the yellow box and then click on the tab "Adjust Speaker Volume."

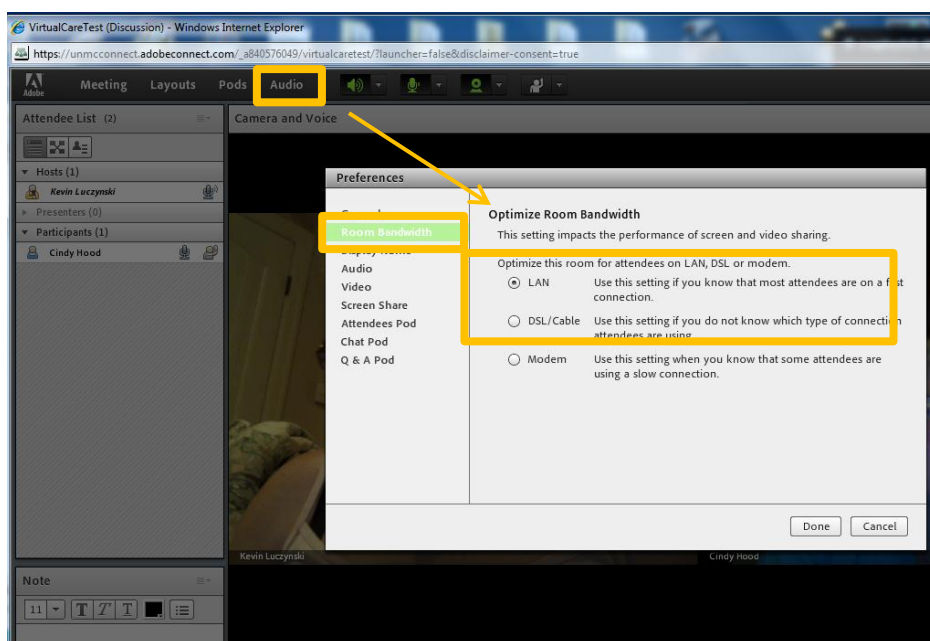


Second Step: In the “Adjust Speaker Volume” window, you can modify the volume by moving the slider to the left and right.

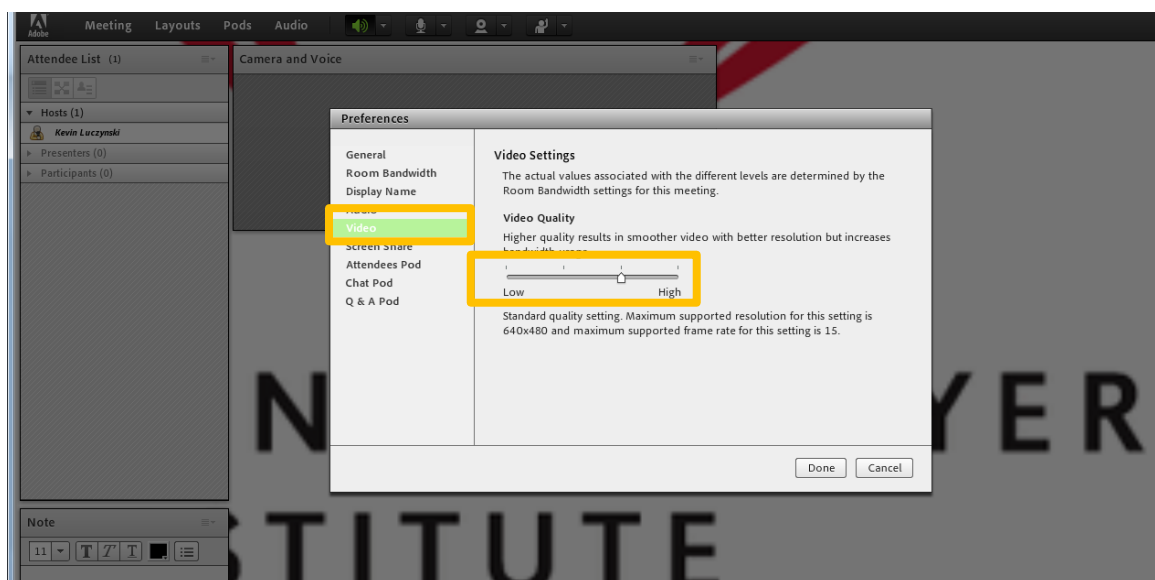


How do you adjust the video quality?

Step 1: Please click meeting tab then click room bandwidth. LAN is the default setting and has the largest bandwidth size but you can select either DSL/Cable or Modem options to decrease the bandwidth of the video to try and improve the live video feed.



Step 2: Please click the video tab. You can also decrease the bandwidth of the video to try and improve the live video feed by reducing the video quality. The default setting has the highest quality but move it down one notch to see if it helps the live video feed.



7.5.2 GotoMeeting



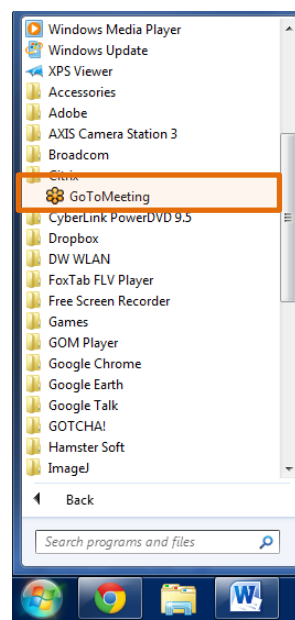
General Information: For the best results, use a wired connection instead of a wireless connection. Although a video conference can take place with a wireless connection, the likelihood of video becoming pixelated or jumpy increases. Therefore, the overall quality of the video conference may be reduced.

How do you host a meeting?

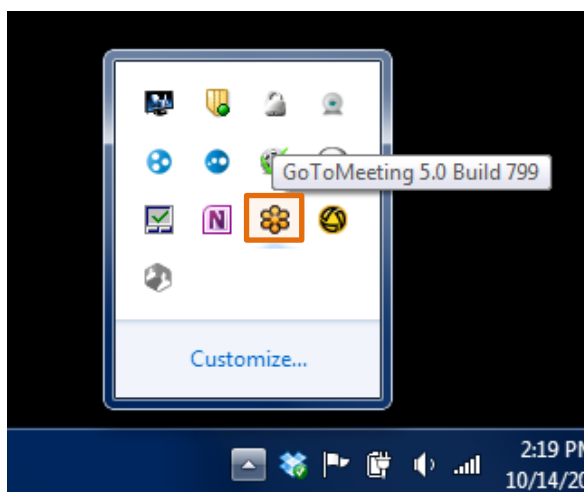
Steps:

1. Attach a webcam.
2. Visit <http://tinyurl.com/3pbyjcw> and download GotoMeeting application.
3. Once the application has downloaded, double-click icon (Check your taskbar [picture on the left] program files folder [picture on the right below]).

need to follow a few prompts to install the



the
click the
below] or
You may
program:



4. Enter

kevin.luczynski@unmc.edu (username) and “_gotomeetingfaces1_” (password).

5. Please see Figure 1 on the next

page.

How do you join a meeting?

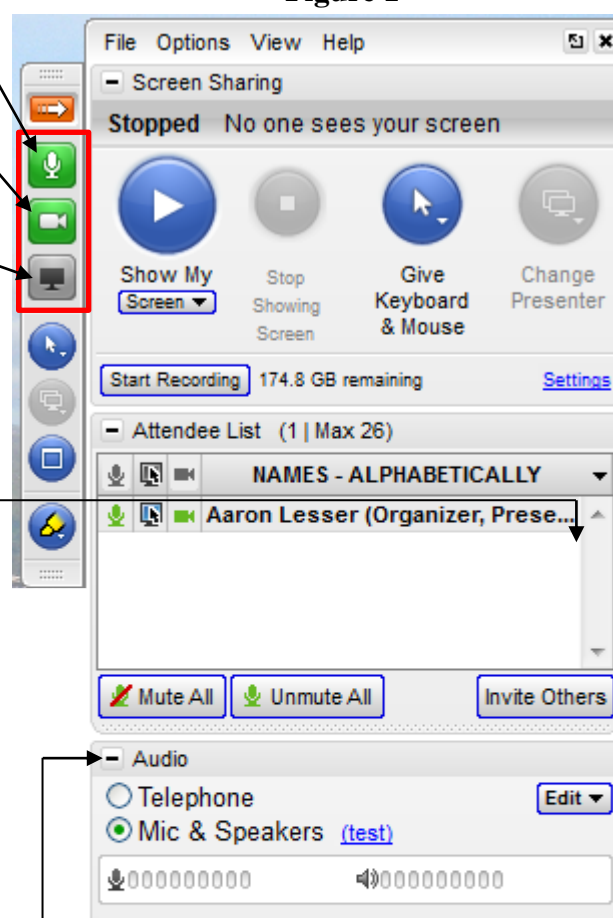
Steps:

1. The host must send you the Meeting ID number before you can enter a meeting.
2. Enter www.joingotomeeting.com into the address bar of the web browser.
3. Type the 9-digit code of the meeting you would like to join and click “Enter”
4. A dialog will appear before the meeting is initiated. Click “Allow”.
5. A new dialog box will appear that will ask you to enter a name that the other meeting members can see. You can also, provide an email address.
6. Follow the same steps in Figure 1 after these have been completed.

- Ensure the button that looks like a microphone is green.
- To share your webcam, click the button that looks like a video camera and make sure it is green.
- To share your screen, click on the button that looks like a computer monitor. This will allow the meeting members to view the screen of the host.
- To invite members to the meeting, expand the “Attendee List” tab and click on “Invite Others”. By clicking that button, a website and Meeting ID will appear (see below). Either call the person to tell them this information or copy the text and send it via e-mail.

When you copy the text and paste it into the body of your e-mail message there will be information for using a telephone. Do not include the telephone numbers by deleting this information before sending the message (see Figure 2 below).

Figure 1



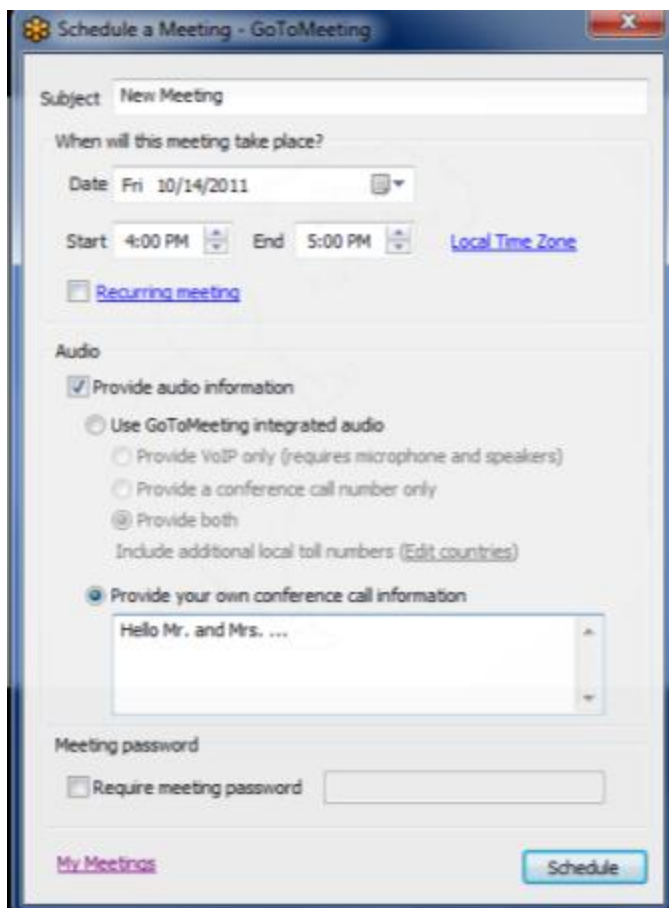
How do you schedule a reoccurring meeting?

Steps:

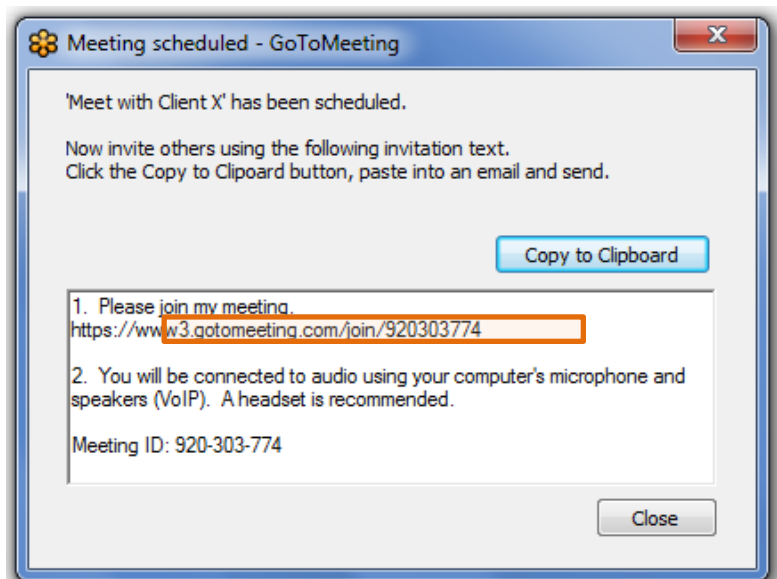
1. Log into GotoMeeting by double-clicking the program icon and entering the username and password (see above).
2. Click on 'schedule a meeting' after signing into GotoMeeting.



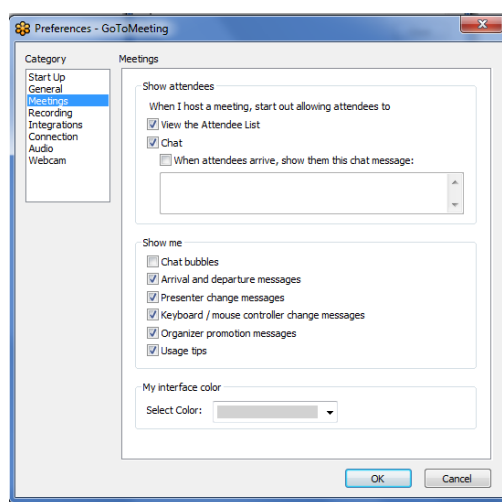
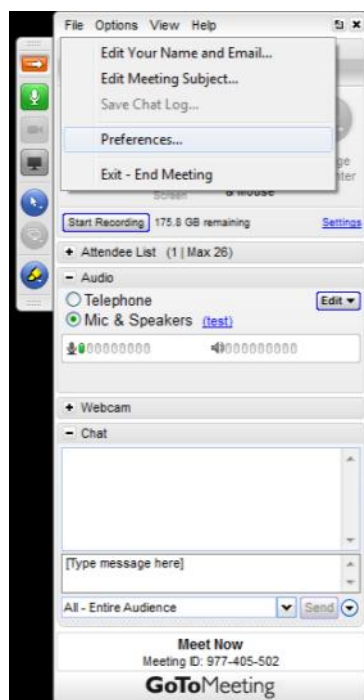
3. You can setup a reoccurring meeting with each family you serve, which will allow you to keep the Meeting ID consistent across all of the meeting.



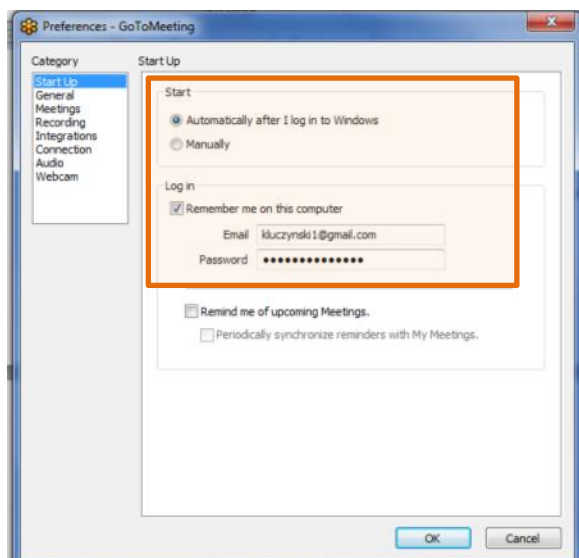
4. After you have established your meeting details, send the client the information and have the client enter the link included in the clipboard (pictured below) into a web browser. Save the link as a bookmark to allow quick access into the meeting.



What are some tips and suggestions for troubleshooting?

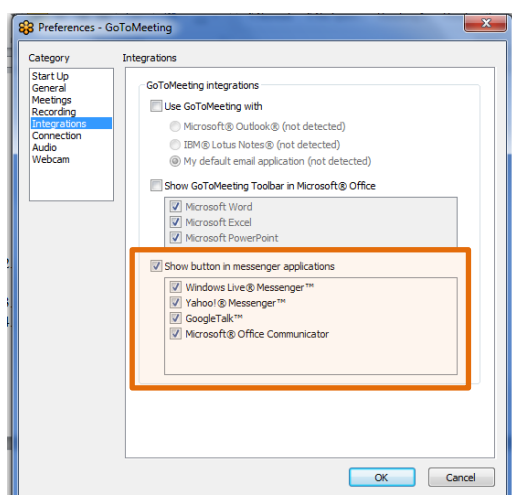


1. What are the startup options?
 - a. Enter the username and password and save the credentials for future use.



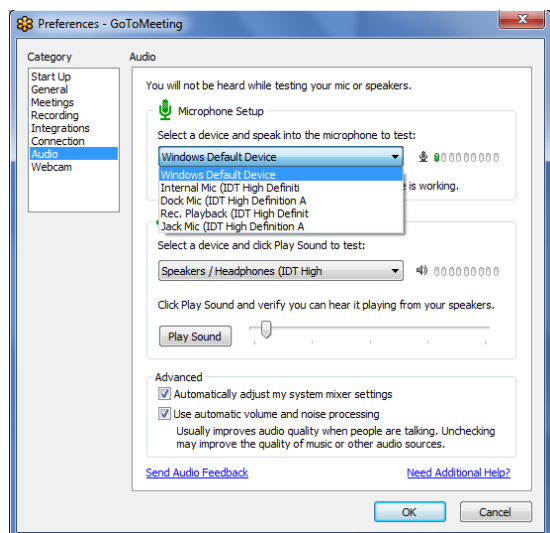
2. Integrations

- a. You can exclude additional programs that are included in the GotoMeeting platform.



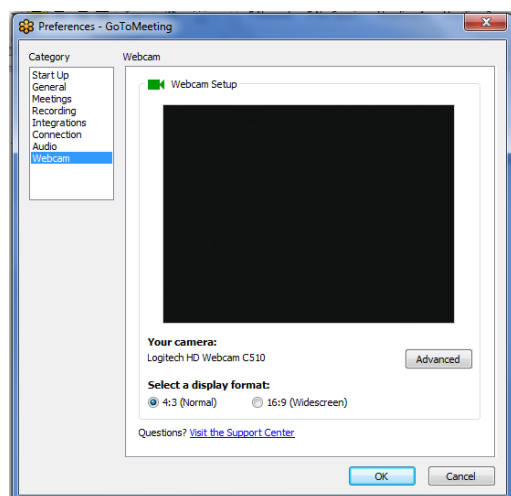
3. How are the audio settings modified?

- a. Under this tab you can select the speaker and microphone devices so that both parties can hear each other.
- b. Ensure that the device for both the microphone and speakers is set to “Windows Default Device”.
- c. Check the volume control icon at the bottom right corner of your computer screen and make sure that it is not muted and is set at an adequate volume.
- d. On the GoToMeeting program control panel, make sure that the microphone is not “Muted.”
- e. If you’re using an external microphone or headphones, check to see if it has an on-off switch and make sure that it’s set to “on.”



4. How are the webcam settings modified?

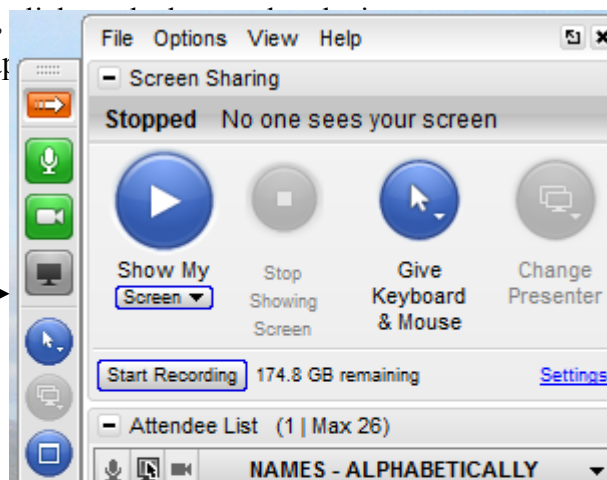
- a. Here you can ensure that the external webcam is selected and other settings are selected.



5. How do you share your desktop?

- a. During meetings, your desktop (i.e., the information that is currently displayed on your monitor) can be shared with the members of the meeting.
- b. The desktop does not need to be shared during each meeting but there may be occasions when it is necessary.
- c. To begin sharing your desktop, click the desktop icon in the bottom toolbar (see below) so that it appears highlighted.

- Click here to begin sharing the desktop →



7.5.3 Vidyo

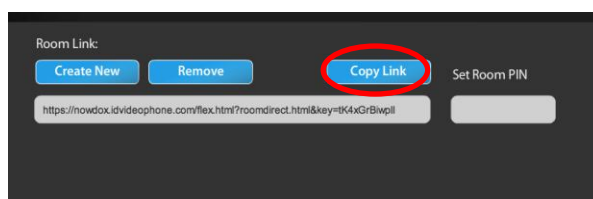
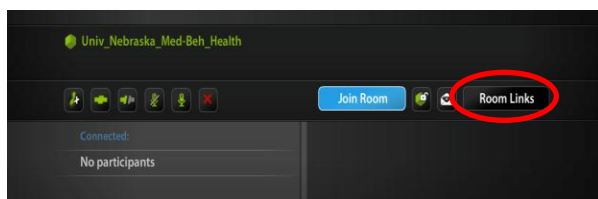
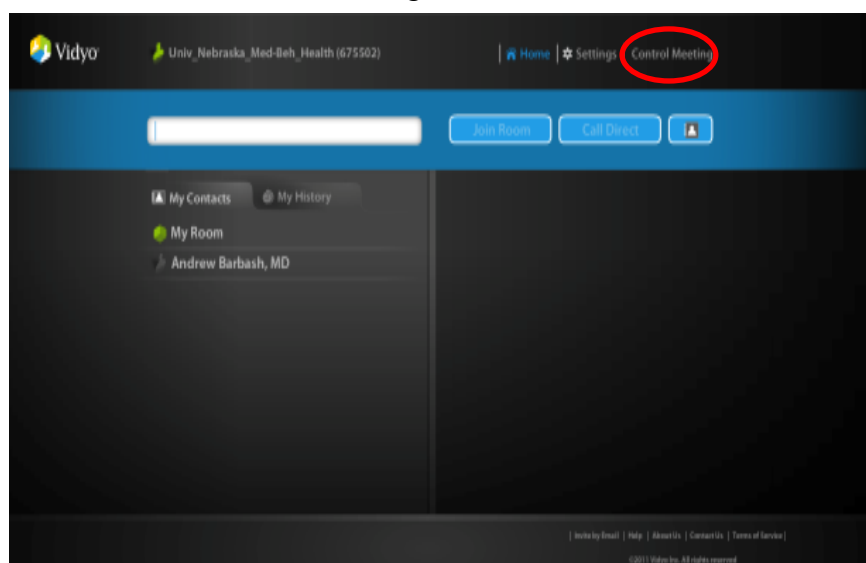
Materials Needed:

- Lap/Desktop computer
- Web Cam (internal or external; external is best)
- Internet Connection (hardwired is best)
- Email Access

First Time Clinician Users:

- Log into Vidyo Conferencing
 1. Open a web browser
 2. Click on your Vidyo link (e.g., from your email account) or go the following link:
<https://demo.vidyoportal.unmc.edu>
 3. Enter your **mmiuser2** (as your user name and password)
 4. Click “Log In”
- Download the Vidyo Conferencing Desktop when prompted
- Click the Vidyo Conferencing Desktop to launch Vidyo
- Preparing to share a Meeting Room (Figure 1):
 1. Click “Control Meeting”
 2. Click “Room Links”
 3. Click “Copy Link”
 4. Click “Close”
 5. Click “Join Meeting”

Figure 1



- Initial set-up for Audio, Microphone, and Video settings (Figure 2)
 - Look at the audio, microphone, and video camera icons to assess if they are on (green) or off (red)

Figure 2



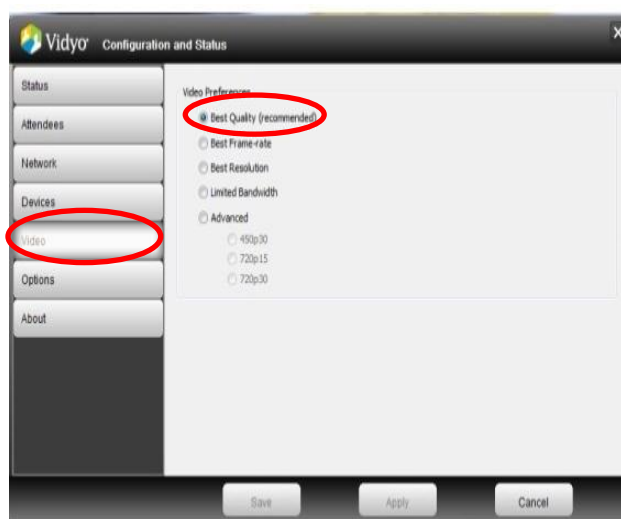
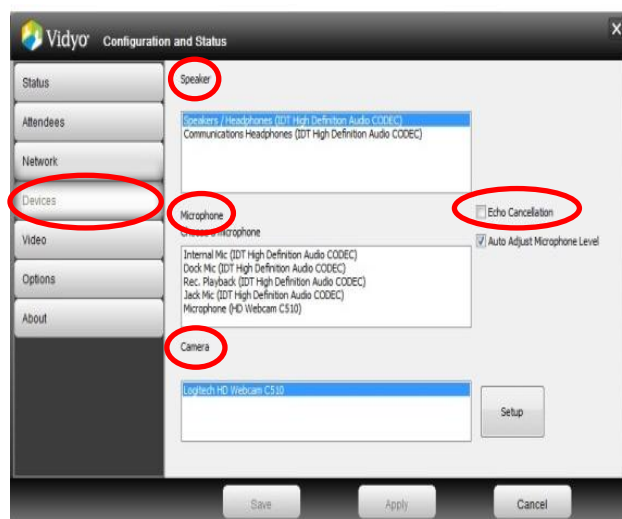
- If the icons are off (i.e., colored red), proceed to Step #3. If the icons are on (i.e., colored green), proceed to Step #4
- Single click each icon to turn it on (i.e., colored green)
- Click the configurations icon (Figure 3 & 4)

Figure 3



- Click “Devices”
 - Make sure *microphone*, and *camera* are appropriately set (NOTE: you should select either internal or external. In other words, if you use an external webcam make sure to use the external microphone attached to it instead of the computer microphone. This might vary by computer and may require live contact to adjust)
 - Make sure *echo cancellation* is checked
 - Make sure *auto adjust microphone* is unchecked
- Click “Video”
 - Make sure *best quality* is selected (may need to be adjusted once you start a meeting. See FAQ section below)
- Click “Save”

Figure 4

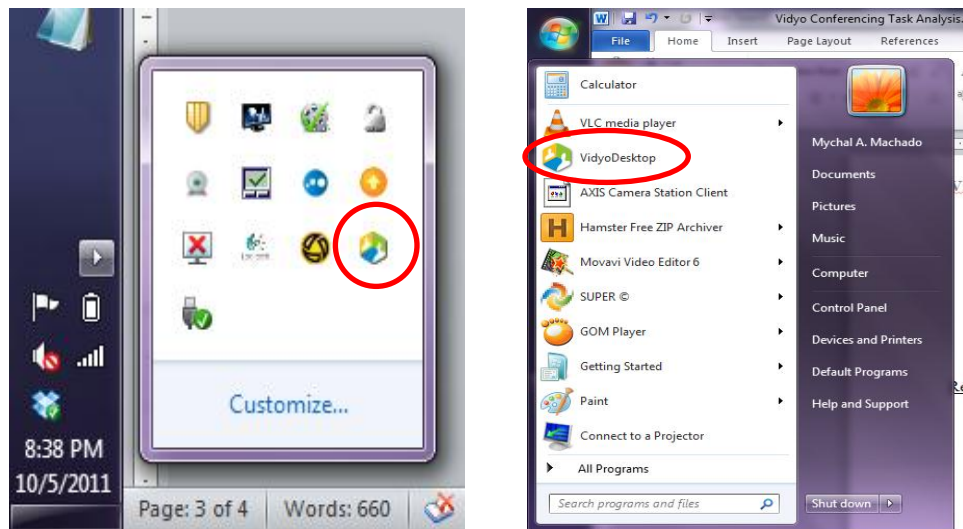


- Send Invitation
 1. Open your preferred email
 2. Paste the copied room link into the body of a new email message
 3. Inform the invited parties of the following:
 - Click on the link to go to the Vidyo Conferencing Log-in webpage
 - Create a guest name
 - Click “Join”
 4. Send email to all parties you would like to invite to your meeting room

Repeat Users:

1. Launch Vidyo Conferencing Desktop by clicking the Vidyo icon on the icon bar or from your start menu (see Figure 5)

Figure 5



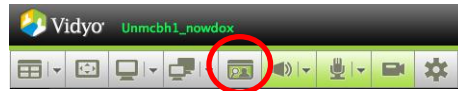
2. Click “Join Room”
3. Copy and send your room link

FAQ:

- How do I check my own camera view?

- Click the self-view icon (Figure 6)

Figure 6



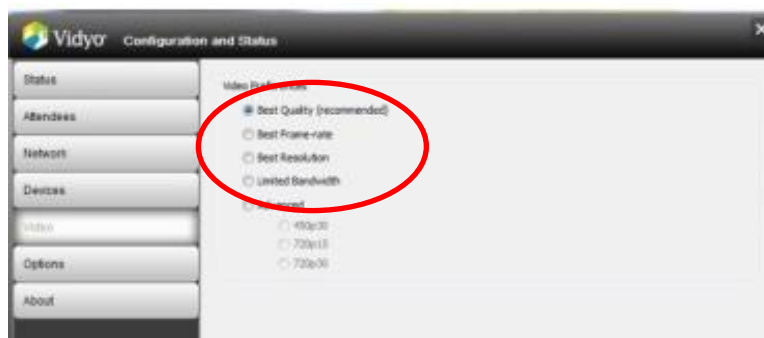
- Why are the invited parties unable to see me, the other parties, both?
 - Check whether the video icon is green (on)
 - Check whether the correct camera is selected in the *devices* dialogue box
- Why can I not hear the other parties?
 - Check whether the audio icon is green (on)
 - Check whether the correct audio (speaker) output is selected
- Can I share more than video with Vidyo?
 - Yes! You can share any of your open windows with the invited parties
 - Select the share icon (Figure 7)
 - Select what screen you would like to share from the drop list
 - To stop sharing your screen and return to video, select “Display 1”

Figure 7



- What if the video is lagging, pixelated, delayed, freezing, or all of the above?
 - Request that all parties use a hardwire internet connection as this will greatly help with data transfer
 - Try to reduce the screen size
 1. Adjust the screen as you would any other program window (from the bottom right-hand corner)
 2. Adjust until quality improves
 - Try to adjust the video quality
 1. Click the configuration icon (Figure 8)
 2. Click “Video”
 3. In the following order, select each video quality, to see which is best
 - Limited-band width
 - Best frame rate
 - Best resolution
 4. Click “Save”

Figure 8



7.6 Adobe Presenter Task Analysis

This section of the manual provides an overview for creating a presentation using Adobe Presenter.

1. Preparing your presentation

- a. Create your presentation and write a script for each slide and paste them into the notes section of the slide (The recording process will be easier if you have your thoughts written).

2. Inserting pre-recorded video

- a. To insert a video file such as .flv, .asf, .wmv, .mpg, .mp4, .dvi, and, .mov start with a blank slide.
- b. In the **Adobe Presenter** tab, **Video** area, click the **Import** button and navigate to your video folder and select the video file. You should not need to modify the video quality settings.
- c. Once you have selected your video file, click **Open**. The video appears as a white box on the slide.
 - i. If you want to resize the video, hold the **Shift** key, click a corner handle and drag the handle to resize. This will resize the video proportionally.
 - ii. If you increase the size of the video will likely result in pixilated, fuzzy images.
 - iii. While working with video, you may sometimes see a bar across the top of your presentation that reads: ***Security warning: Some active content has been disabled.*** In order to work with the video content, you will need to click the **Options** button, and then select **Enable this content**.

3. Recording Video

- a. Click on the **Capture** button in the Video pod within **Adobe Presenter**.
- b. Select the video recording device in the dropdown box.
- c. Choose which slide you would like to record video on and make no other changes to the video or audio settings (you can choose whether you would like to record audio with your video).
- d. Click on the record button (red circle) and record your video.
- e. Once you have completed recording the video, press either the pause or stop button.
- f. You can then choose to either save the video to your desktop (recommended) or delete the recording (It is not necessary to choose either of these options: the alternative is to proceed and the video will be self-contained in the presentation and folder will be placed on your desktop).
- g. Once you have finished recording for a particular slide, click stop and the video will appear as a white box on your slide (to resize the video, see above).
 - i. The video will not playback when you view your slideshow. It will only be visible after the presentation has been published.

4. Editing Video

- a. Click the **Edit** button in the Video pod within Adobe Presenter.
- b. A dialog will appear with the clip you just recorded. You can drag the “bookends” to modify the beginning or end of the video (the blue area that appears is the part that will be played).
- c. You can add effects such as a fade in or fade out.
- d. You can choose to mute the audio during playback.
- e. The period of time that elapses before the video is played can also be adjusted to a specific time, after the slide animations, or after the recorded audio has played.
- f. Once you have finished editing your video, click OK.

5. Recording Audio

- a. You can use your laptop’s built-in microphone or a Web cam microphone.
- b. To begin recording, click the **Adobe Presenter** tab, then click **Record**.
- c. You will receive a message asking you to set your microphone levels.
 - i. After doing so, click OK and the **Adobe Presenter – Record Audio** window appears.
 - ii. Check the box for **Record/Play this slide only**. This will allow you to pause and catch your breath between slides.
- d. To view your script, click the **View Script** checkbox. Then click the **Import Notes** button and click the appropriate button to import notes for **All Slides**. Then click OK (This will import the notes for each).
- e. When you are ready to record, click the red Record button. Begin by reading your script into the microphone. If you make any mistakes, you will be able to edit these later.
- f. If the slide has no animations, you will see a large **Stop Recording** button. Click this when you are finished recording the slide. You can click **Next** to go to the next slide in the presentation.
- g. If the slide has animations, the button will say **Next Animation** until there are no more animations on the slide, at which point the button will say **Stop Recording**.
- h. Click the **Next Animation** button every time your script indicates there is an animation. If you make a mistake and click too quickly or too slowly, don’t worry. You will have a chance to adjust your transitions later.
- i. When you’re done recording audio for the entire presentation, click **OK**.

6. Editing Audio

- a. Under the **Adobe Presenter** menu, in the **Audio** pod, click **Edit**. Note the waveform indicating the recording of your voice (You can zoom in on the waveform, or zoom out of the waveform, depending on the amount of detail you need to see).
- b. You can click the **Play** button to listen to your audio. If you find an area that you need to remove, just select that area. You can click the Play button again to confirm that you want to delete this spot.
- c. When you are satisfied with your selection, simply click the **Delete** button.
- d. You can adjust the selection if necessary by adding in a period of silence.

7. Publication Settings

- a. To adjust the duration between slides without any audio or video click on **Settings** under the Publication pod and click on the **Playback** tab.
 - i. You can specify the number of seconds between slides.
- b. The **Slide Manager** tab will allow you to view the slides with multimedia embedded on the slides. Within this tab you can specify the settings of each slide and whether you would like the viewer to be able to go back and review specific slides.

8. Publishing the Presentation

- a. Before you can publish the presentation, save the file to your desktop or other storage device.
- b. Click on the **Publish** button in the Presentation pod within Adobe Presenter
- c. Publish the presentation to your computer and select **Zip files** before publishing.
 - i. The presentation will be published to your desktop along with a folder that includes the audio and other file associated items.

Appendix 2

(Pre- and post-tests for Experiments 1 and 2)

Experiment 1 (tutor-training): “Behavior Implementation Skills for Work Activities”

Situation 1	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Aggression	Confederate does not touch the target stimuli and hits Mom.
Teacher Correct Response	Adult provides a model prompt.
Confederate Prompted Correct	Confederate touches the target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides descriptive praise and access to an edible.
Situation 2	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Echolalia	Confederate repeats the last word of the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate Echolalia	Confederate repeats the last word of the instruction.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 3	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Disruption	Confederate swipes the materials off the table.
Teacher Correct Response	Adult gets the target stimuli without provide attention to the confederate and puts the stimuli back on the table in the same order and provides a model prompt.
Confederate Prompted Correct	Confederate touches the target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides descriptive praise and an edible.

Situation 4	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Correct	Confederate touches the target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides descriptive praise.
Situation 5	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Negative Vocalizations	Confederate starts screaming above conversational level.
Teacher Correct Response	Adult provides a model prompt.
Confederate Negative Vocalizations	Confederate starts screaming above conversational level.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 6	
Description	Response
Teacher Instruction	Receptive Identification
Confederate No Response	Confederate does not respond to the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate No Response	Confederate does not respond to the instruction.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 7	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Correct	Confederate touches the target stimulus within 5s of the instruction.
Teacher Correct Response	Mom provides descriptive praise and a tangible.

Situation 8	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Incorrect	Confederate touches a non-target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate No Response	Confederate does not respond to the instruction.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 9	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Aggression	Confederate forcefully pushes the adults arms away from the stimuli.
Teacher Correct Response	Adult provides a model prompt.
Confederate Aggression	Confederate hits the adult's arm.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 10	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Disruption	Confederate bangs on the table with their hands.
Teacher Correct Response	Adult provides a model prompt.
Confederate Aggression	Confederate hits the adult's torso.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 11	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Incorrect	Confederate touches a non-target stimulus within 5s of the instruction.

Teacher Correct Response	Adult provides a model prompt.
Confederate Prompted Incorrect	Confederate touches a non-target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides a physical prompt and does not provide reinforcement or descriptive praise.
Situation 12	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Correct	Confederate touches a target stimulus within 5s of the instruction.
Teacher Correct Response	Mom provides descriptive praise, provides an edible.
Situation 13	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Echolalia	Confederate repeats the entire instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate Negative Vocalizations	Confederate starts crying above conversational level.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 14	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Negative Vocalizations	Confederate starts yelling above conversational level.
Teacher Correct Response	Adult provides a model prompt.
Confederate Echolalia	Confederate repeats the last word the adult says.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 15	
Description	Response

Teacher Instruction	Receptive Identification
Confederate Unprompted Incorrect	Confederate touches a non-target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate Disruption	Confederate bangs on the table.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 16	
Description	Response
Teacher Instruction	Receptive Identification
Confederate No Response	Confederate does not respond within 5s of the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate Disruption	Confederate swipes the materials on the table.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 17	
Description	Response
Teacher Instruction	Receptive Identification
Confederate No Response	Confederate does not respond within 5s of the instruction.
Teacher Correct Response	Adult provides a model prompt.
Confederate Prompted Incorrect	Confederate touches a non-target stimulus within 5s of the instruction.
Teacher Correct Response	Adult provides a physical prompt and does not provide descriptive praise or a reinforcer.
Situation 18	
Description	Response
Teacher Instruction	Receptive Identification
Confederate Unprompted Correct	Confederate touches a target stimulus within 5s of the instruction.
Teacher	Mom provides descriptive praise and access to a tangible.

Correct Response

Experiment 2 (parent-training): “Behavioral Implementation Skills for Play Activities”

Situation 1	
Description	Response
Confederate Aggression	Confederate stops playing and hits Mom.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 2	
Description	Response
Confederate Echolalia	Confederate repeats exactly what Mom says.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 3	
Description	Response
Confederate Disruption	Confederate throws a toy across the room.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 4	
Description	Response
Confederate Functional Play	Confederate pick up a new toy (e.g., cars) and plays with the toy or object that is consistent with its typical use (e.g., rolling the car and making the sounds vroom vroom).
Parent Correct Response	Mom provides descriptive praise and a HP item.
Situation 5	
Description	Response
Confederate Negative Vocalizations	Confederate stops playing and starts screaming above conversational level.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 6	
Description	Response
Confederate Joint Attention	Confederate gestures to direct the adults attention toward an item
Parent Correct Response	Mom provides descriptive praise and access to an edible

Situation 7	
Description	Response
Confederate Initiates Conversation	Confederate says, "I like the zoo."
Parent Correct Response	Mom provides descriptive praise and continues the conversation.
Situation 8	
Description	Response
Confederate Initiates Play	Confederate says, "Play catch?"
Parent Correct Response	Mom provides descriptive praise and complies with child's mand to paly catch.
Situation 9	
Description	Response
Set up	Mom is blowing bubbles, pops one and makes a sad face.
Confederate Describes Other's Emotions	Confederate says, "You look sad."
Parent Correct Response	Mom provides descriptive praise and access to a HP item.
Situation 10	
Description	Response
Confederate Disruption	Confederate bangs on the floor with hands and feet.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 11	
Description	Response
Confederate Functional Play	Confederate pick up a new toy (e.g., bubbles) and plays with the toy or object that is consistent with its typical use (e.g., blowing bubbles).
Parent Correct Response	Mom provides descriptive praise.
Situation 12	
Description	Response
Confederate Negative Vocalizations	Confederate stops playing and starts crying above conversational level.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 13	
Description	Response

Confederate Echolalia	Confederate says, "Hakuna matata, what a wonderful phrase."
Parent Correct Response	Mom changes nothing. (EXT)
Situation 14	
Description	Response
Confederate Initiates Conversation	Confederate says, "Red car."
Parent Correct Response	Mom provides descriptive praise, an edible, and continues the conversation.
Situation 15	
Description	Response
Confederate Aggression	Confederate kicks Mom in the leg.
Parent Correct Response	Mom changes nothing. (EXT)
Situation 16	
Description	Response
Set up	Mom is playing with a toy and makes a really happy face.
Confederate Describes Other's Emotions	Confederate says, "You look happy."
Parent Correct Response	Mom provides descriptive praise and an edible.
Situation 17	
Description	Response
Confederate Initiates Play	Confederate hands a car to Mom for her to play with.
Parent Correct Response	Mom provides descriptive praise, provides an edible and then plays with the car.
Situation 18	
Description	Response
Confederate Joint Attention	Confederate gestures to direct the adults attention toward an item
Parent Correct Response	Mom provides descriptive praise and access to a tangible